

NB-370, National Board Synopsis

The National Board Synopsis of Boiler and Pressure Vessel Laws, Rules and Regulations is a compilation of jurisdiction laws, rules, and regulations set forth in a concise, easy-to-read format. It features the prevailing requirements, detailed contact information, and regulatory history for each jurisdiction.

The data herein was collected and assembled under the auspices of the chief inspection officer listed on his or her jurisdictional synopsis. Only those synopses personally verified by the jurisdictional authorities have been included. Each has been reviewed and approved by its respective chief inspection officer for accuracy and content.

Users are advised some references to legislative text have been rewritten to clarify certain regulations and make phrases and terminology more uniform. Additionally, some references have been edited to remove redundancies and ambiguities.

Users are reminded each synopsis is only a brief outline or distillation of a specific jurisdiction's laws, rules, and regulations. In order to avoid misinterpretation of the data or failing to address the regulatory nuances of an individual jurisdiction, users are advised to consult the jurisdiction's chief inspection officer before reaching any decision that may have critical consequences. The National Board, its members, and employees assume no liability for the use or misuse of the information herein.

Questions and comments regarding the National Board Synopsis of Boiler and Pressure Vessel Laws, Rules and Regulations should be referred to:

National Board Public Affairs Department
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The National Board gratefully acknowledges the continuing and generous cooperation of both National Board member and nonmember jurisdictions, without whose assistance this collection of data would never have been possible.

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ALABAMA



STATE DEPARTMENT

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Fitzgerald Washington, Secretary

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EMPOWERMENT

Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 2000

Date rules and regulations implemented: February 2004.

State statute: Alabama State Statutes, Title 25. Labor, Chapter 12. *The Boiler and Pressure Vessel Safety Act*, Sections 25.12.1 through 25.12.22.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition)
2. *National Board Inspection Code* (2013 Edition).
3. API-510 (2002 Edition).
4. ASME Code B31.1, boiler pressure piping and piping systems.
5. ANSI/ASME CSD-1 (2012 Edition).
6. NFPA-85.
7. ASME PVHO-1 (2007 Edition).

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels except the following:

1. Boilers and pressure vessels under federal control or under regulations of Title 49 of the *Code of Federal Regulations*, Parts 192 and 193.
2. Pressure vessels used for transportation and storage of compressed liquefied gases when constructed in compliance with specifications of the US Department of Transportation, and when charged with gas or liquid, marked, maintained, and periodically requalified for use, as required by regulations of the US Department of Transportation.
3. Pressure vessels located on vehicles operating under the rules of other state or federal authorities 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. Pressure vessels that do not exceed any of the following weights and measures:
 - a. 5 cubic feet in volume and 250 psig pressure;
 - b. 1-1/2 cubic feet in volume and 600 psig pressure;
 - c. An inside diameter of 6 inches with no limitation on pressure.

6. Pressure vessels having an internal or external working pressure not exceeding 15 psig, with no limit on size.
7. Pressure vessels with a nominal water-containing capacity of 120 gallons or less containing water under pressure, including those containing air, the compression of which serves only as a cushion.
8. Pressure vessels containing water heated by steam or any other indirect means or hot-water supply boilers, equipped with ASME- or National Board-approved safety relief valves which are directly fired with oil, gas, or electricity when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A nominal water-containing capacity of 120 gallons.
9. Pressure vessels or other structures or components not considered to be within scope of ASME Code, Section VIII.
10. Pressure vessels in the care, custody, and control of research facilities used solely for research purposes which require one or more details of noncode construction or which involve destruction or reduced life expectancy of those vessels.
11. Boilers and pressure vessels operated and maintained for the production and generation of electricity, provided they are insured and regularly inspected by an inspector who has been issued a *Certificate of Competency* by the Secretary of Labor.
12. Boilers and pressure vessels operated and maintained as part of a manufacturing process, provided the vessels are insured.
13. Boilers or pressure vessels subject to OSHA standards of compliance.
14. Boilers and pressure vessels operated and maintained by a public utility, including but not limited to boilers and pressure vessels operated and maintained for the production of electricity.
15. Autoclaves used only for the sterilization of reusable medical or dental implements in the place of business of any professional licensed by the laws of this state.
16. Boilers and pressure vessels located on farms and used solely for agricultural or horticultural purposes.
17. Heating boilers or pressure vessels located in private residences or in apartment houses of fewer than six family units.
18. Any pressure vessel used as an external part of an electrical circuit breaker or transformer.
19. Pressure vessels on remote oil- or gas-producing lease locations that have fewer than ten buildings intended for human occupancy per 0.25 square mile, and where the closest building is at least 220 yards from any vessel.
20. Pressure vessels used for storage of liquid propane gas under the jurisdiction of the state fire marshal, except for pressure vessels used for storage of liquefied petroleum gas, 2,000 gallons or above, which have been modified or altered.
21. Air storage tanks not exceeding 16 cubic feet, 120 gallons in size, and under 250 psig pressure.
22. Any and all pressure vessels associated with oil, natural gas, related by-products, feedstock, and product manufacturing operations.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers: one annual internal and external inspection.
2. Low-pressure steam or vapor-heating boilers: one biennial inspection with an internal inspection every four years.
3. Hot-water heating and hot-water supply boilers: one biennial inspection with an internal inspection at the discretion of the inspector.
4. Pressure vessels subject to internal corrosion: one triennial inspection with an internal inspection at the discretion of the inspector.
5. Pressure vessels not subject to internal inspection: inspection interval set by the board.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for power boilers, 24 months for low-pressure steam heating, hot-water heating, and hot-water supply boilers, 24 months for non-corrosive service vessels, and 36 months for other vessels, is issued by the Commissioner of Labor upon payment of a fee as listed below:

STATE FEES

1. Power boilers and high-temperature water boilers:

- a. 50 square feet or less heating surface - **\$60.00**
 - b. Over 50 square feet but less than 2,000 square feet heating surface - **\$90.00**
 - c. 2,000 square feet or more - **\$120.00**
2. Heating boilers:
- a. With manhole - **\$90.00**
 - b. Without manhole - **\$60.00**
3. Pressure Vessels (Fees are based on the maximum length of the vessel times the maximum width or diameter thereof in feet.)
- a. Each pressure vessel subject to inspection having a product, as determined above, of 50 square feet or less - **\$60.00**
 - b. For each additional 100 square feet, or portions thereof, of area in excess of 50 square feet - **\$10.00**
4. Inspection fees will be charged for any trip made by the inspector for the purpose of a certificate inspection, permit inspection, follow-up inspection, insurance cancellation inspection, internal, and/or external inspection.
5. Installation permit fee:
- a. All pressure vessels - **\$50.00**
 - b. All boilers - **\$50.00**
 - c. All Alabama State Specials - **\$75.00**
6. Certificate of Inspection fees:
- a. Power boilers and high-pressure, high-temperature boilers - **\$50.00 annually**
 - b. Low-pressure steam or vapor-heating boilers - **\$50.00 biennially**
 - c. Hot-water heating and hot-water supply boilers - **\$50.00 biennially**
 - d. Pressure vessels - **\$10.00 annually**
7. The owner, user, agent, or installer is responsible for ensuring equipment is accessible and prepared for inspection and necessary personnel are available as required. Failure to meet any of the above requirements will result in cancellation of the inspection and a fee of **\$100**.
8. Inspection fees or operating certificate fees must be paid in order to validate operating certificates. Fees not paid within sixty (60) calendar days of completion of inspection shall cause the suspension of the operating certificate until such time as all outstanding fees are paid. When an operating certificate is suspended for lack of payment, the deputy inspector shall re-inspect the boilers, hot-water heaters, or pressure vessels suspended from operation, and the inspection fee will be charged and collected prior to reinstating the operating certificate.
9. Special inspection fee, for the purposes of any inspection performed by the State other than a regularly scheduled inspection, excluding inspections encompassed under the provisions of paragraph (4) above - **\$100.00**

ALASKA



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STATE DEPARTMENT

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EMPOWERMENT

Department of Labor and Workforce Development empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1955

Date of latest amendment to law: December 1999.

Date rules and regulations implemented: 1955.

Date of latest amendment to rules and regulations: March 2016.

State statute: Statutes of Alaska, Title 18. Labor and Workforce Development, Part 4. Occupational Safety and Health,

Chapter 10. *Boiler and Pressure Vessel Construction Code.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, and X; code cases and case interpretations on a case-by-case basis
2. Canadian registration-numbered vessels designed and constructed in conformance with ASME Code, but not bearing the ASME symbol, will be approved for use upon receipt of the *Manufacturer's Data Report*. Manufacturers must file a copy of the *Manufacturer's Data Report* with the department on ASME forms before installation.
3. *National Board Inspection Code* (2015 Edition).
4. National Board registration is required for boilers and pressure vessels.
5. National Board VR Certificate is required for valve repair and resealing.
6. Special design or construction requires application in writing for approval of the chief boiler and pressure vessel inspector.
7. A tracer number is required whenever a boiler or pressure vessel requiring state certification is altered or welding is performed, in addition to the required National Board certification.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: All.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and unfired pressure vessels, except the following:

1. Boilers and unfired pressure vessels under federal regulation.
2. Unfired pressure vessels meeting the requirements of the US Department of Transportation for shipment of liquids and gases under pressure.
3. Air tanks located on vehicles operating under the regulations of other state authorities 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 5 cubic feet or less, or having an inside diameter not exceeding 6 inches.
6. Unfired pressure vessels designed for a pressure not exceeding 15 psi when not located in places of public assembly.
7. Manually-fired miniature boilers for locomotive, boat, tractor, or stationary engines constructed or maintained as a hobby for exhibition use, having a volume less than 5 cubic feet and grate area less than 2 square feet, and equipped with an ASME Code-stamped safety valve of adequate capacity and size, a water level indicator, and pressure gage.
8. Antique manually-fired boilers of locomotive, boat, tractor, or stationary engines constructed and maintained as a hobby and equipped with an ASME Code-stamped safety valve of adequate capacity and size, provided such boilers may not be used for exhibition purposes without a special operating permit issued by the Department of Labor and Workforce Development.
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 ASME;
 - b. Contains only water;
 - c. Does not exceed 120 gallons in capacity, a water temperature of 210°F, a pressure of 150 psig, or heat input of 200,000 BTU an hour;
 - d. Contains a tempering valve that will regulate the outlet domestic water temperature at not more than 140°F.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

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, which 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. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Maximum water-containing capacity of 120 gallons.
6. Coil-type boilers, unless the water-containing capacity is 6 gallons or greater, the water temperature exceeds 350°F, steam is generated in the coil, or the diameter of the tubing is greater than 3/4 inch.

INSPECTIONS REQUIRED

Power boilers and high-pressure, high-temperature water boilers:

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 is warranted.
2. Low-pressure steam or vapor heating boilers must be given a certificate inspection every two years with an internal inspection every four years if construction permits such an inspection.

3. Hot-water heating, hot-water supply, and coil-heating boilers must be given a *Certificate of Inspection* every two years 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.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies are accepted in lieu of inspections made by a department inspector.
2. Reports of inspections must be filed with the department on department forms within 30 days after inspection.
3. The department must be notified of *suspension of insurance on account of dangerous conditions*.
4. The department must be notified of *new business* (within 30 days) and *discontinuance of insurance* (within 20 days).

CERTIFICATE OF INSPECTION

A *Certificate of Inspection*, valid for 12 months for power boilers, 24 months for low-pressure heating boilers, and one to five years for unfired pressure vessels, is issued by the department upon payment of a fee as listed below.

STATE FEES

1. The owner/user of a boiler or pressure vessel which is inspected by a special inspector, chief inspector, or deputy inspector shall pay the department the following fees:
 - a. Internal high-pressure boilers:
 - i. Up to 250 square feet heating surface - **\$90.00**
 - ii. Over 250 square feet heating surface - **\$100.00**
 - iii. 750 square feet or more heating surface - **\$130.00**
 - b. External high-pressure boilers:
 - i. Up to 250 square feet heating surface - **\$85.00**
 - ii. Over 250 square feet heating surface - **\$85.00**
 - iii. 750 square feet or more heating surface - **\$100.00**
 - c. Internal low-pressure boilers:
 - i. Up to 500 square feet heating surface - **\$80.00**
 - ii. Over 500 square feet heating surface - **\$105.00**
 - d. External low-pressure boilers:
 - i. Up to 500 square feet heating surface - **\$65.00**
 - ii. Over 500 square feet heating surface - **\$75.00**
 - e. Cast-iron and miniature boilers - **\$65.00**
 - f. Hot-water supply boilers - **\$55.00**
 - g. Unfired pressure vessels - **\$65.00**
2. Shop or special inspections, per hour - **\$150.00**
3. Certificate fees for all boilers and pressure vessels - **\$60.00**

MISCELLANEOUS

1. A *Special Inspector Commission* may be issued to insurance inspectors or owner/user inspectors holding a *Certificate of Competency* or a commission issued by a state that has adopted the ASME Code, upon application to the department together with a photostatic copy of said *Certificate of Competency* and commission.
2. All boilers and pressure vessels shall be stamped with (or have applied with permanent marker) an Alaska registration number.
3. State law does not require operators to be licensed.

ALBERTA



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PROVINCIAL DEPARTMENT

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Canada

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EMPOWERMENT

Alberta Municipal Affairs is empowered to make, alter, or amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1898 – NEW LAW: 1994

Date of latest amendment to law: 2014.
Date rules and regulations implemented: 1898.
Date of latest rules and regulations: 2015.
Provincial statute: Safety Codes Act, Revised Statutes of Alberta—2000, Chapter S-1.

RULES FOR CONSTRUCTION AND STAMPING

Construction (Codes and standards are adopted under the Pressure Equipment Safety Regulation which provides for automatic adoption of amended or replaced codes and standards. Users are advised to contact the regulatory authority for the latest changes):

1. CSA B51 (2014 Edition), CSA B52 (2013 Edition), CSA Z662 (2015 Edition).
2. ASME Code (2015 Edition), including special conditions for the use of Section VIII, Division 2. (The Administrator has issued clarification for the use of Section VIII, Division 2.
3. Code cases and interpretations are not automatically accepted. Code rule changes adopted upon publication.
4. ASME CSD-1 (2012 Edition) — Part CW only (through reference in CSA B51).
5. ASME B31.1 (2014 Edition), B31.3 (2014 Edition), B31.5 (2013 Edition), B31.9 (2014 Edition).
6. Manufacturers must submit a copy of the ASME Data Report form, or a data report in a form acceptable to the Chief Inspector and Administrator for each boiler or vessel. Boilers and pressure vessels manufactured outside Canada also must be registered with the National Board.
7. Manufacturers must submit (in duplicate) designs of boilers, pressure vessels, pressure piping, and fittings for survey and registration before fabrication.
8. Shop inspections outside Canada must be carried out by the holder of a *National Board Commission*. In Canada, an inspector must be approved by the chief inspector of the province where he/she is employed.
9. Special design or construction requires approval by the Chief Inspector and Administrator.
10. Liquefied petroleum gas containers must comply with ASME Code and National Fire Protection Association Standard NFPA 58.
11. Anhydrous ammonia vessels must comply with ASME Code and ANSI/CGA G-2.1-2014, *Safety Requirements for the Storage and Handling of Anhydrous Ammonia and CSA B51*.
12. ISO-16528, Part 1, 1st Edition 2007 for construction not addressed in the other adopted codes and standards provided the same engineering philosophy, safety margins and administrative requirements in CSA B51 are

followed.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: for all boilers and pressure vessels manufactured outside Canada, and for all Section VIII Divisions 2 and 3 pressure vessels.

Boilers and pressure vessels must be stamped with the letters "CRN" preceding the assigned design registration number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, boiler external piping, pressure vessels, and fittings.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING. Exemptions for lower-hazard equipment are listed in the *Pressure Equipment Exemption Order and Pressure Equipment Safety Regulation*.

INSPECTIONS REQUIRED

Inspection intervals shall be established in accordance with ABSA document AB-506, Inspection & Servicing Requirements for In-Service Pressure Equipment. Preferred inspection interval is:

1. Power boilers: Annual inspection.
2. Heating boiler Biennial Inspection.
3. Pressure vessels over 15 psi: Every two to five years, depending on service.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by ABSA inspectors.

CERTIFICATE OF INSPECTION

Certificate of Inspection Permits are issued by the Administrator and Chief Inspector of ABSA.

PROVINCIAL FEES

1. Annual registration fees for power boilers, depending upon heating surface, vary from \$200.00 CAD to \$276.00 CAD.
2. Annual registration fees for heating boilers, depending upon heating surface, vary from \$70.00 CAD to \$139.50 CAD.
3. Annual registration fees for pressure vessels other than shell-and-tube heat exchangers, depending on volume, vary from \$46.50 CAD to \$61.00 CAD.
4. Annual registration fees for shell-and-tube heat exchangers, depending on heating surface, vary from \$46.50 CAD to \$61.00 CAD.
5. For fees covering design registration, shop inspections and special inspections and the annual registration fees, refer to the Fee Schedule for Delegated Functions on the [ABSA Web site](#).

MISCELLANEOUS

1. The Chief Inspector and Administrator will issue a *Certificate of Competency* (Grade B, Grade C, Machine Welding Operator or Tack Welder) to qualified welders who successfully meet the requirements and pass a satisfactory examination.
2. Notification in conformance with regulations is required when selling, installing, or performing repairs to boilers and pressure vessels.
3. Operators of boilers over 20 kW are required to be certified.
4. All elliptical manway openings must be at least 12 inches by 16 inches and circular manways must be at least 16 inches in diameter (inside dimensions).

ALBUQUERQUE, NEW MEXICO

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MUNICIPAL DEPARTMENT

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EMPOWERMENT

City of Albuquerque Code Review Committee empowered to make, alter, amend, and interpret rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1956

Date of latest amendment to law: November 2008.

Date rules and regulations implemented: 1956.

Date of latest amendment to rules and regulations: November 2008.

City ordinance: Albuquerque Code of Ordinances, Article II. Construction Codes, Chapter 10. Building and Building Regulations, Chapter 3. Permits and Inspections, *Boiler Inspections*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (latest Edition), Sections I, IV, IX, and code cases.
2. ASME CSD-1 (latest Edition).
3. *National Board Inspection Code* (latest Edition).
4. National Board registration required.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, S, U, UM, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except those under the jurisdiction of the federal government, state government, and utilities.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except hot-water heating and hot-water supply boilers located in residential occupancies of five or fewer family units, and Group M (mercantile) occupancies.

INSPECTIONS REQUIRED

1. Power boilers:
 - a. One annual internal inspection;
 - b. One annual external inspection. External inspection should follow internal inspection by six months.
2. Low-pressure boilers:

- a. One biennial external inspection where construction permits.

INSURANCE INSPECTION REQUIREMENTS

Reports of all inspections must be filed with the department within 30 days.

CERTIFICATE OF INSPECTION

The owner or user of said boiler shall pay \$25.00 to the city of Albuquerque upon issuance of the certificate.

MUNICIPAL FEES

1. Power boilers – internal inspection:
 - a. 50 square feet heating surface or less - **\$20.00**
 - b. More than 50 and up to 4,000 square feet heating surface - **\$40.00**
 - c. More than 4,000 and up to 10,000 square feet heating surface - **\$50.00**
 - d. More than 10,000 square feet heating surface - **\$60.00**
2. Power boilers – external inspection - **\$20.00**
3. Low-pressure boilers:
 - a. Heating boilers - **\$20.00**
 - b. Hot-water supply boilers - **\$15.00**

MISCELLANEOUS

1. A permit is required to install or repair boilers.
2. The City of Albuquerque must follow and adopt the rules and regulations of the State of New Mexico.

ARIZONA



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STATE DEPARTMENT

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EMPOWERMENT

Industrial Commission of Arizona empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes, as advisory only. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1977

Date of latest amendment to law: August 2017.
Date of passage of rules and regulations: 1977.
Date of latest rules and regulations: August 2009.
State statute: Arizona Revised Statutes, Title 23. Labor, Article 11. *Arizona Boiler Act*, Sections 471 through 488.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition, 2007 Addendum), Sections I, II, IV, V, VIII (Div, 1,2 & 3), IX, B31.1 with interpretations and code cases accepted on a case-by-case basis.
2. ASME CSD-1 (2006 Edition, 2006 Addendum, current edition accepted).
3. *Manufacturer's Data Reports* shall be kept at the location of the boiler and be available for review upon request from an authorized inspector.
4. *National Board Inspection Code* (2007 Edition, 2007 Addendum, current edition accepted).
5. Lined hot-water heaters:
ANSI Standard (Z21.10.3), gas-fired heaters.
6. National Board registration required for all boilers, lined hot water heaters and pressure vessels.
7. Blowdown & Blowoff Systems must meet the provisions of National Board Rules and Recommendations for the Design and Construction of Boiler Blowoff Systems (1991 or latest edition).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamp and designators are required:

1. National Board: NB, R, VR.
2. ASME: A, E, H, HLW, HV, M, PP, S, U, UM, UV, UD, U2, U3, UV3,V.

All boilers, lined hot water heaters and direct fired jacketed steam kettles shall be tagged with an Arizona serial number preceded by the letters "AZ".

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, lined hot water heaters and pressure vessels, except the following:

1. Boilers, lined hot water heaters and pressure vessels regulated by the US government.
2. Boilers, lined hot water heaters and pressure vessels located in private residences, or apartment complexes less than six units.
3. Boilers, lined hot water heaters and pressure vessels operated on Indian reservations.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power and high temperature water boilers:
 - a. An annual internal certificate inspection and an external inspection while under operating conditions;
 - b. An internal inspection if the inspector determines from an external inspection that there is danger to public or worker safety.
 - c. A triennial (36-month) internal inspection and annual external inspection when fully attended by qualified attendants per Arizona Boiler Rule, R20-5-408(C).
2. Direct fired jacketed steam kettles: inspection every two years.
3. Heating or process boilers, not exceeding 15 psi (steam or vapor):
 - a. A certificate inspection every two years;
 - b. An internal inspection where construction permits.
4. Hot-water heating boilers and lined hot-water heaters operating at pressures not exceeding 160 psi and temperatures not exceeding 250°F: An initial certificate inspection at time of installation with no further inspections required (may be an external inspection).
5. Lined hot-water heaters are exempted when none of the following limitations are exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water-containing capacity of 120 gallons.

The Certificate of Inspection may be made 30 days prior to the certificate due date, but in all cases shall not be more than 30 days after such date.

SPECIAL INSPECTION REQUIREMENTS

1. National Board accredited companies are required to inspect to the *Arizona Boiler Rules* (Title 20, Chapter 5, Article 4); ASME Codes I, II, IV, V, VIII (Div, 1, 2, 3), IX, B31.1 and requirements of the *National Board Inspection Code*.
2. Inspections made by third party inspectors and employed by National Board and ASME accredited companies and issued a special inspection certificate by the chief boiler inspector are accepted per A.R.S. 23-485
3. Reports of certificate inspections must be filed with the division on forms per Arizona Administrative Code, Title 20, Chapter 5, R20-5-407(D) within 60 days after inspection.
4. Reports of external inspections are required.
5. *Written, canceled, not renewed or suspended because of unsafe conditions:* All insurance companies shall notify the division, on National Board forms, within 30 days of all boiler risks.
6. All insurance companies shall immediately notify the division of any unsafe boiler which they refuse to insure, and submit a report of defects.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the division upon receipt of an inspection report showing no requirements.

STATE FEES

None.

MISCELLANEOUS

1. Repairs and alterations shall conform to the applicable provisions of the *National Board Inspection Code*.
2. A *Certificate as Special Inspector* and an identification card are issued to inspectors holding a *National Board Commission*, without charge, upon application to the division together with a photostatic copy of said National Commission. An interview with the chief boiler inspector for all "IS" Commissioned inspectors employed by an NB-369 accredited company is required prior to issuance of the *Certificate as Special Inspector* and identification card. A *Certificate as Special Inspector* will expire annually March 31st each year.
3. The National Board Inservice Commission examination "On Demand" will be administered through Applied Measurement Professionals (AMP) with a computer-based examination. See www.nationalboard.org, "Commissioned Inspectors, Examination Information".
4. Qualified attendant required for operation of power boilers.

ARKANSAS



STATE DEPARTMENT

Dennis R. Hannon, Chief Boiler Inspector
Arkansas Department of Labor
Boiler Inspection Division
10421 West Markham
Little Rock, AR 72205

Telephone — 501.682.4512
Email — dennis.hannon@arkansas.gov
Fax — 501.682.4562

EMPOWERMENT

Boiler advisory board assists with the formulation of rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1917

Date of latest amendment to law: July 1, 2006.
Date rules and regulations implemented: 1961.
Date of latest amendment to rules and regulations: July 2006.
State statute: Arkansas Code 20-23-101et seq.; and 5-64-1301 through 1303.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition, 2004 Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI, and code cases.
2. ASME CSD-1 (1998 Edition, 1999 Addendum).
3. ASME PVHO-1 (1998 Edition, 1998 Addendum).
4. Code addenda and case interpretations accepted automatically.
5. *Manufacturer's Data Report* on ASME forms must be filed with the department before installation.
6. National Board registration required for boilers and pressure vessels.
7. Boilers and unfired pressure vessels must be shop-inspected and stamped "NB" by an inspector holding a *National Board Commission*.
8. Special design or construction requires approval of the chief inspector.
9. Anhydrous ammonia vessels have separate rules and regulations. They must be constructed in accordance with ASME Code and must be shop-inspected and stamped "NB".
10. Liquefied petroleum gas containers are covered under a separate law and have separate rules and regulations.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR. Repair and installation firms must be licensed.
2. ASME Code: all.

At the time of first inspection, inspectors shall apply a state serial number preceded by the letters "AR" on the vessel.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Air tanks of 12 gallons or less containing 150 psi or less.
2. Boilers and unfired pressure vessels which are under the inspection regulations of the Interstate Commerce Commission.
3. Boilers and unfired pressure vessels used for domestic purposes in private dwellings and apartment houses of eight or fewer apartments.
4. Unfired pressure vessels (other than the above):
 - a. With a maximum allowable working pressure of 15 psi or less;
 - b. Having a volume of 5 cubic feet or less or coil-type steam generators without accumulative drum;
 - c. Vessels used in connection with or for the storage of liquefied petroleum gases.
5. Hot-water heaters under 200,000 BTU per hour, except those heaters located in hospitals, schools, day-care centers, and nursing homes.
6. Hot-water supply storage tanks which are heated by steam or any other direct or indirect means:
 - a. When heat input is less than 200,000 BTU per hour;
 - b. When water temperature is less than 210°F;
 - c. When the vessel has a nominal water-containing capacity of less than 120 gallons.
7. Pressure vessels which are:
 - a. An integral part of components of rotating or reciprocating mechanical devices and hydraulic or pneumatic cylinders where the primary design considerations and stresses are derived from the functional requirements of the device;
 - b. An integral part of the structure and have a primary function of transporting fluids from one location to another within a system.
8. Vessels with a nominal water-containing capacity of 120 gallons or less for containing water under pressure, including those containing air, the compression of which serves only as a cushion.
9. Boilers and unfired pressure vessels used in connection with the production, distribution, storage, or transmission of oil, natural gas, or casinghead gas.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.
 Except: Air storage vessels located in service stations and garages.

INSPECTIONS REQUIRED

Boilers and fired pressure vessels:

1. One annual internal inspection.
2. One annual external inspection.
3. Unfired pressure vessels every two years.
4. Boilers, gas, and electric water heaters located in schools, nursing homes, day-care centers, and hospitals: Once annually.
5. Low-pressure steam-heating boilers: One internal inspection every three years.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector, except field inspections of anhydrous ammonia vessels.
2. Reports of inspection must be filed with the department on National Board forms within 30 days after inspection. Failure to file within 60 days after due date will result in a \$100.00 fee plus expenses charged to the insurance company. Permission for an extension of time may be granted by the chief inspector.
3. The department must be notified by wire of *suspension of insurance on account of dangerous conditions*, followed by a report on approved forms.
4. The department must be notified of *new business* and *discontinuance of insurance* on approved forms.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for one year, is issued by the department for boilers and fired pressure vessels.

The fee is \$15.00, payable by the owner or user directly to the department.

2. *Certificate of Inspection*, valid for two years, is issued by the department for unfired pressure vessels. The fee is \$30.00, payable by the owner or user directly to the department.

STATE FEES

1. New, Boilers – Installation Permit Fees:

- a. Up to 25 hp - **\$15.00**
- b. Over 25 hp to 50 hp, inclusive - **\$20.00**
- c. Over 50 hp to 100 hp, inclusive - **\$25.00**
- d. Over 100 hp to 200 hp, inclusive - **\$30.00**
- e. Over 200 hp to 300 hp, inclusive - **\$50.00**
- f. Over 300 hp to 400 hp, inclusive - **\$60.00**
- g. Over 400 hp to 500 hp, inclusive - **\$70.00**
- h. Over 500 hp - **\$95.00**

2. New, Unfired Pressure Vessels – Installation Permit Fees:

- a. 500-gallon capacity or less - **\$15.00**
- b. 501-gallon to 1,000-gallon capacity - **\$20.00**
- c. 1,001-gallon to 5,000-gallon capacity - **\$40.00**
- d. 5,001-gallon capacity and more - **\$50.00**

3. The fee paid for the issuance of a permit for the installation of pressure piping shall be **\$100.00**.

4. Boilers – Inspection Fees:

- a. Up to 15 hp, inclusive - **\$10.00**
- b. Over 15 hp to 50 hp, inclusive - **\$13.00**
- c. Over 50 hp to 100 hp, inclusive - **\$18.00**
- d. Over 100 hp to 150 hp, inclusive - **\$20.00**
- e. Over 150 hp to 250 hp, inclusive - **\$23.00**
- f. Over 250 hp to 500 hp, inclusive - **\$35.00**
- g. Over 500 hp - **\$50.00**

5. Shop inspection: **\$440.00** per day; **\$220.00** per half day; plus expenses, including mileage (not to exceed the rate authorized by the General Assembly), and meals and lodging.

6. Unfired Pressure Vessels – Inspection Fees:

- a. 150-gallon capacity or less - **\$9.00**
- b. 151-gallon to 500-gallon capacity - **\$10.00**
- c. 501-gallon to 1,000-gallon capacity - **\$11.00**
- d. 1,001-gallon to 2,000-gallon capacity - **\$12.00**
- e. 2,001-gallon to 3,000-gallon capacity - **\$13.00**
- f. 3,001-gallon to 5,000-gallon capacity - **\$14.00**
- g. 5,001-gallon capacity or more - **\$18.00**

MISCELLANEOUS

1. The *National Board Inspection Code* is required by the department.
2. Certificates of Competency and commissions to inspect are issued to those holding a National Board commission and are employed by an insurance company, owner user organization or the State of Arkansas.
3. Fee for commission and certificate of competency is \$25.00 for initial application (or company change) and \$15.00 for renewals.
4. *Certificate of Competency and Commission* expires at the end of the fiscal year, June 30.
5. A license is required to sell, install, or repair boilers and pressure vessels. The annual fee is \$75.00.
6. Operators of boilers rated at 50 hp and above are required to be licensed. Contact the department for

information on boiler operator examination and license fees.

7. For a copy of the *Arkansas Boiler and Pressure Vessel Laws, Rules and Regulations*, contact:

Arkansas Department of Labor
Boiler Inspection Division
10421 West Markham
Little Rock, AR 72205
Telephone — 501.682.4513

8. All welding on code boilers and fired/unfired pressure vessels is to be reported to the chief inspector on R-1 forms or similar forms. Endorsement from boiler division is required.

BRITISH COLUMBIA



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PROVINCIAL DEPARTMENT

Anthony Scholl
Provincial Safety Manager
British Columbia Safety Authority
where Authority for Administration Designated from Province of British Columbia
505 Sixth Street
New Westminster, B.C. V3L 0E1
Canada

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Email — tony.scholl@safetyauthority.ca
Fax — 778.396.2064

EMPOWERMENT

Minister empowered to make, amend, and alter rules and regulations.
Boiler Board: None

DATE OF LAW PASSAGE: 1896

Date of latest amendment to law: Feb 6, 2013
Date rules and regulations implemented: 1896.
Date of latest rules and regulations: Feb 6, 2013
Provincial statute: Revised Statutes of British Columbia, *Safety Standards Act and the Power Engineers Boiler Pressure Vessel and Refrigeration Safety Regulation*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (2009 Edition), B52 (2005 Edition); N285.0-08.
2. ASME Code (2010 Edition, 2011 Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI, XII, and code cases.
3. ASME Code addenda and case interpretations adopted after review by boiler safety manager.
4. ASME CSD-1 (2009 Edition)
5. ASME B31.1 (2010 Edition), B31.3 (2010 Edition), B31.5 (2010 Edition). B31.9 2011.
6. ASME PVHO-1 (2007 Edition)
7. ASME PTC 25 (2008 Edition)
8. ASME/ANSI QAI-1-2010
9. ANSI K61.1 (1999 Edition)
10. API STD 530 Revision 2008; 510 Revision Edition 9; 570 Revision Edition 3.
11. Manufacturers must file copy of the *ASME Manufacturer's Data Report* or an *Affidavit of Manufacturer* for each boiler or pressure vessel. Affidavit forms supplied by the authority on request. Data report and stamping shall show the Canadian registration number (CRN)
12. NFPA-85, 2011 Edition.
13. Manufacturers must submit designs of boilers, pressure vessels, and pressure piping for acceptance and registration before commencing fabrication.
14. Shop inspections must be carried out by holder of a *National Board Commission* and "A" endorsement.

15. Liquefied petroleum gas containers must comply with requirements of ASME Code. Designs must be submitted for survey and registration.

16. *National Board Inspection Code* (2011 Edition).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: all.

Special stamping: Canadian Registration Number (CRN)

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, pressure vessels, pressure piping systems, fittings, and plant and refrigeration equipment, except:

1. A Pressure Vessel operating at and with relief valves set at a pressure of 103 kPa or less
2. A Pressure Piping System operating at and with relief valves set at a pressure of 103 kPa or less
3. Boilers located in a building that contains four or fewer self contained residential units
4. A Power Plant not exceeding 2 square meters heating surface
5. A Heating Plant not exceeding 3 square meters heating surface
6. A Heating Plant that has no valves or other obstruction to prevent circulation of fluid between the boiler and an expansion tank that is fully vented to the atmosphere.
7. Pressure vessels not equipped with a heating element that is constructed for the storage of water at a temperature of 65°C or less and a pressure of 1 720 kPa or less or has a diameter of 610 mm or less.
8. Pressure vessels used for hydraulic purposes having an operating temperature of less than 82°C, if the primary design considerations are mechanical in nature and stresses are derived from the functional requirements of the device rather than fluid pressure.
9. Refrigeration plants with a capacity not exceeding 5 kW.
10. Cushion tanks with diameters of 610 mm or less constructed to operate at a working pressure not exceeding 207 kPa.
11. Piping systems not exceeding 103 kPa.

Miscellaneous

The following require licensed operators:

1. A Power Plant exceeding 10 square meters boiler capacity
2. Low pressure steam boilers exceeding 30 square meters heating surface
3. Hot water heating Plants exceeding 150 square meters heating surface
4. Refrigeration plants with refrigerant groups A1, A2 or B1, as defined in CSA B52, exceeding a total plant capacity of 200 kW prime mover nameplate rating.
5. Refrigeration plant with refrigerant groups A3, B2 or B3, as defined in CSA B52, exceeding a total plant capacity of 50 kW prime mover nameplate rating.

See Power Engineers, Boiler, Pressure Vessel, and Refrigeration Safety Regulation, *for minimum capacities and other details.*

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure and low-pressure steam boilers.
2. Hot-water heating boilers.
3. Pressure vessels.
4. Refrigeration Plants.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by a BCSA Boiler Safety Officer.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid until next inspection, is issued by the BCSA.

PROVINCIAL FEES

Fees for registration of designs and shop inspections are calculated on an hourly rate. Operating Permit fees vary with the heating surface in the case of boilers, and with dimensions in the case of pressure vessels. Fee lists are supplied upon request to the BCSA and are available at www.safetyauthority.ca.

MISCELLANEOUS

1. Pressure welders are subject to qualification tests.
2. BCSA must be notified of steam boiler and hot-water boiler installation before equipment is put into operation.
3. Boilers and pressure vessels must be registered with BCSA.
4. Installation Permit is required for the installation of boilers and refrigeration plants.

BUFFALO, NEW YORK

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MUNICIPAL DEPARTMENT

Tim Keenan, Chief Combustion Inspector
Department of Economic Development, Permit and Inspection Services
920 City Hall
65 Niagara Square, Room 312
Buffalo, NY 14202-3379

Telephone — 716.851.4959

716.851.4909

Email — tkeen@city-buffalo.com

Fax — 716.851.5506

EMPOWERMENT

City Common Council empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1896

Date of latest amendment to law: June 1965.

Date of latest amendment to rules and regulations: March 2005.

City ordinance: Charter and Code of Buffalo, New York, Part II. General Legislative, Chapter 94. *Boilers and Engines; Engineers.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, III, IV, VIII (Division 1), and code cases.
2. Code addenda and case interpretations accepted automatically.
3. NFPA 54.
4. Special design or construction requires approval of chief combustion inspector.
5. Code rules updated every ten years (approximately).
6. City of Buffalo follows *New York State Industrial Code* Rules 14 and 4 for high- and low-pressure boilers.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: H, S, U.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

1. All boilers and pressure vessels, except the following:
 - a. Boilers under federal control or regulation.
 - b. Boilers subject to inspection under the US Department of Transportation.
 - c. Boilers located on farms and used solely for agricultural purposes.
 - d. Steam or vapor boilers operating at a gage pressure of not more than 15 psi and located in dwellings occupied by fewer than six families.
 - e. Hot-water boilers located in dwellings occupied by fewer than six families.
 - f. Low-pressure boilers under 100,000 BTU per hour.
2. All unfired pressure vessels, except the following:
 - a. Pressure vessels under federal control or regulation.

- b. Pressure vessels meeting requirements of the US Department of Transportation for shipment of liquids or gases under pressure.
- c. Air tanks on vehicles used for carrying passengers or freight or used directly in the operation of trains.
- d. Pressure vessels having a volume of 5 cubic feet or less or having an inside diameter not exceeding 6 inches.
- e. Pressure vessels designed for pressures of less than 15 psi.
- f. Hot-water supply storage tanks, provided none of the following limitations is exceeded:
 - i. A heat input of 200,000 BTU per hour;
 - ii. A water temperature of 210°F;
 - iii. A nominal water-containing capacity of 120 gallons.
- g. Pressure vessels containing water under pressure, including one containing air, the compression of which serves only as a cushion, provided neither of the following limitations is exceeded:
 - i. A design pressure of 300 psi;
 - ii. A design temperature of 210°F.
- h. Pressure vessels used for agricultural purposes.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Item	Internal	External
High-pressure steam boilers	1 Year	1 Year**
High-pressure hot-water boilers	3 Years*	1 Year**
Low-pressure steam boilers	3 Years	1 Year
Low-pressure hot-water boilers	5 Years	1 Year

*If equipped with manholes and handholes, annual internal inspection is required.
 **Approximately six months after each internal inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of inspection must be filed with department on National Board forms within 21 days.
3. Reports of external high-pressure inspections are not required provided internal inspection reports are submitted.
4. Reports of all internal and external low-pressure inspections must be submitted. The internal low-pressure inspection is considered as a noncertificate inspection for which the \$30.00 fee will not be charged.
5. Shop inspections made by an inspector holding a *National Board Commission* will be accepted.
6. Department must be notified of *suspension of insurance on account of dangerous conditions*.
7. Department must be notified of *new business and discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months, is issued by the insurance company for insured boilers and by the department for uninsured boilers.

MUNICIPAL FEES

Boilers:

1. Input rating up to and including 1,500,000 BTU per hour - **\$21.00**
2. Input rating up to and including 3,000,000 BTU per hour - **\$26.25**
3. Input rating up to and including 6,000,000 BTU per hour - **\$31.50**
4. Input rating in excess of 6,000,000 BTU per hour - **\$42.00**

MISCELLANEOUS

1. An operator's license is required for power boilers.
2. Examinations for boiler operator licenses are given periodically throughout the year.
3. A permit is required to sell, erect, or repair boilers or pressure vessels.
4. See *State of New York Synopsis* page for additional miscellaneous items.

CALIFORNIA



STATE DEPARTMENT

Donald C. Cook, Principal Safety Engineer
Department of Industrial Relations
Division of Industrial Safety and Health
Pressure Vessel Unit Northern Office
Headquarter Office
1515 Clay Street, Suite 1622-A
Oakland, CA 94612-1302

Telephone — 510.622.3066
510.622.3050
Email — dcook@dir.ca.gov
Fax — 510.622.3063

Southern Office
Santa Ana Pressure Vessel District Office
2000 East McFadden Avenue, Suite 215
Santa Ana, CA 92705

Telephone — 714.567.7208
Email — capvinsp@dir.ca.gov
Fax — 714.567.7297

EMPOWERMENT

Department of Industrial Relations and Division of Occupational Safety and Health Standards Board empowered to make, alter, or amend administrative rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1917

Date of latest amendment to law: October 2002.
Date rules and regulations implemented: 1945.
Date of latest amendment to rules and regulations: August 2005.
State statute: California Code of Regulations, Title 8. Chapter 4. Division of Industrial Safety, Subchapter 1. *Unfired Pressure Vessel Safety*, Sections 450 through 560; Subchapter 2. *Boiler and Fired Pressure Vessel Safety*, Sections 750 through 797.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI.
2. ASME PVHO-1 (1997 Edition).
3. ASME B31.1 (2001 Edition).
4. ASME B31.3 (2002 Edition). (Plastic piping is not acceptable unless permitted by specific safety orders.)
5. ASME B31.5 (2001 Edition).
6. Code addenda and case interpretations may be accepted if found — to the satisfaction of the division — to provide equivalent safety.
7. Manufacturers must file a copy of Manufacturer's Data Report with the division before installation of all vessels for use in places of employment in California.
8. National Board registration required for pressure vessels, except "UM" vessels.
9. Specific design or construction of non-ASME Code items requires acceptance by the Division of Occupational Safety and Health.
10. NFPA 58 (1998 Edition).

11. API-510 (August 2003, 8th Edition)

12. Foreign codes: Acceptance may be granted after review by the Pressure Vessel Unit.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: none, except for refinery and oilfield locations require an R stamp. (**R** stamp for repair and alteration is accepted, if used.)
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Steam or other vapor boilers, fired pressure vessels, unfired pressure vessels for the transportation, storage, or use of any poisonous, corrosive, or flammable substance or other products at temperatures above their boiling point at atmospheric pressure or in which pressure is generated by means of a compressor, liquefied petroleum gas and natural gas vessels, anhydrous ammonia tanks, and air tanks, except the following:

1. Boilers and pressure vessels under federal inspection and control or exempted by the labor code.
2. Boilers on automobiles and road motor vehicles.
3. Boilers and unfired pressure vessels used in household service.
4. Air pressure tanks installed on units of transportation subject to the jurisdiction of the US Department of Transportation, the Public Utilities Commission or the Highway Patrol.
5. Unfired pressure vessels not subject to an internal or external pressure of more than 15 psi with no limitation on size.
6. Unfired pressure vessels having an inside diameter not exceeding 6 inches with no limitation on pressure.

Such vessels must be designed and constructed according to recognized standards or to good engineering practice with a factor of safety of at least four.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Periodic field inspection is mandatory for the following vessels only:

1. Power boilers (both fired and unfired), except miniature boilers and small power boilers provided they are fitted with certain automatic controls and none of the following is exceeded:
 - a. 100 square feet of heating surface;
 - b. 16-inch inside diameter steam drums;
 - c. 100 psi maximum allowable working pressure;
 - d. 35-gallon water capacity when filled to normal operating level;
 - e. 400,000 BTU per hour input to burners.
2. Liquefied petroleum gas tanks, except cylinders made and maintained in accordance with US Department of Transportation regulations.*
3. Air tanks, except for air tanks of 1-1/2 cubic feet or less capacity, not subject to a maximum pressure of more than 150 psi.

*With more than 125-gallon capacity including transportation tanks.

INSPECTIONS REQUIRED

1. Fired boilers: One annual internal and external inspection (Exception: Boilers installed in turbo-electric plants in such a manner that each boiler furnishes steam to a single turbine – inspected internally at least once each 18 months). Title 8, Section 770 allows fired boilers to go up to three years without internal inspection after application and acceptance by the Pressure Vessel Unit.
2. Unfired boilers: Title 8, Section 770 allows unfired boilers to go up to six years without internal inspection after application and acceptance by the Pressure Vessel Unit.
3. Other boilers: The division may establish internal inspection intervals other than those established for fired boilers after application and review.
4. Pressure vessels:

- a. One inspection at least every three years for portable air tanks and five years for all other air tanks. Air tanks not exceeding 25 cubic feet in volume or 150 psi design pressure only require an initial inspection (An indefinite permit shall remain in effect until such time as there is an alteration or change that will affect the safety of the tank.);
- b. Liquefied petroleum gas tanks in accordance with the following schedule:

Usage	Over 125 Gallons
Transportation tanks	5 years
Dispensing units, trap tanks and skid tanks	3 years
Mobile fuel tanks	5 years
Storage tanks vapor withdrawal	5 years

See Section 476 of the Unfired Pressure Vessel Safety Laws for inspection of underground tanks.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors holding a valid Certificate of Competency issued by the division are accepted in lieu of inspections made by a Pressure Vessel Unit engineer. The Pressure Vessel Unit will issue the Permit to Operate upon receipt of the inspection report and a \$15.00 fee to cover the cost of processing the permit. If the processing fee is not received at the time of receipt of the inspection report, the Pressure Vessel Unit will notify the person owning or having the custody, management, or operation of the tank or boiler that the permit will be issued upon receipt of the fee.
2. Reports of inspection must be filed with the Pressure Vessel Unit on prescribed forms within 21 days after inspection.
3. The Pressure Vessel Unit must be notified of suspension of insurance on account of dangerous conditions on approved forms.
4. The Pressure Vessel Unit must be notified of new business and discontinuance of insurance on approved forms.

CERTIFICATE OF INSPECTION

1. Permit to Operate, valid for 12 months for power boilers, 36 months for portable air tanks, and five years for all other air tanks, is issued by the inspection agency on forms furnished by the Pressure Vessel Unit after object is in compliance with regulations and necessary fees are paid. Air tanks subject to a maximum allowable working pressure not exceeding 150 psi, as shown by the required ASME Code marking, and having a volume of 25 cubic feet or less, shall be issued an Indefinite Permit provided that they comply with all applicable requirements of the state safety order.
2. Permit to Operate is issued for liquefied petroleum gas tanks in accordance with the schedule in INSPECTIONS REQUIRED.

STATE FEES

1. A fee of \$135.00 per hour or part thereof, including travel time, shall be charged for all shop, field-erection and resale inspections of all tanks, boilers, parts of tanks and boilers, and nuclear components, as well as consultations, surveys, audit manual reviews, and other activities required or related to the ASME Code or other national standard for all boiler and tank shops when made by qualified engineers employed by the Pressure Vessel Unit.
2. fee of \$160.00 per hour or any part thereof, based on quarter-hour intervals, shall be charged for field permit inspection of air tanks, liquefied petroleum gas tanks, and boilers by qualified safety engineers employed by the Pressure Vessel Unit.
3. Whenever a person owning or having the custody, management, or operation of an air tank, liquefied petroleum gas tank, or boiler fails to pay the fees required under this section within 60 days after notification, said person shall pay, in addition to the fees required under this section, a penalty fee equal to 100 percent of the fee.

MISCELLANEOUS

1. Examinations for Certificate of Competency are held by the Pressure Vessel Unit in March, June, September, and December. The written portion of the examination is that of The National Board of Boiler and Pressure Vessel Inspectors. A \$250.00 examination fee is required. Applications for permission to sit for examinations

must be received by the Pressure Vessel Unit at least 30 days prior to examination date.

2. Reciprocal Commission may be issued to an inspector holding a valid National Board Commission, providing he/she satisfactorily passes a multiple-choice, open-book examination on the California Boiler and Fired Pressure Vessel and Unfired Pressure Vessel Safety Orders, and applicable sections of the Labor Code.
3. Repairs by fusion welding must be made in accordance with California Safety Orders. No alteration or repair shall be made without the authorization of a qualified inspector; this includes qualified inspectors in the employ of owner/user organizations whose inservice programs have been approved by the Pressure Vessel Unit.
4. State contractor's license required to sell, install, or repair boilers and pressure vessels.
5. A license is not required to operate boilers or pressure vessels, except in the City of Los Angeles.
6. A copy of the boiler and pressure vessel laws, Unfired Pressure Vessel Safety Orders and Boiler and Fired Pressure Vessel Safety Orders (CCR-TITLE 8), can be obtained via telephone through Barclays Law Publishers at 800.888.3600

CHICAGO, ILLINOIS



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MUNICIPAL DEPARTMENT

Michael J. Ryan, Chief Boiler Inspector
City of Chicago Boiler Bureau
2045 W. Washington Blvd., 2nd Floor
Chicago, IL 60612

Telephone — 312.743.7284
Email — Michael.Ryan@cityofchicago.org
Fax — 312.743.7425

EMPOWERMENT

Commissioner empowered to make, alter, amend, and interpret rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1875

Date of latest amendment to law: September 1989.
Date of latest amendment to rules and regulations: July 1989.
City ordinance: Municipal Code of Chicago, Illinois, Title 4. Business, Occupations and Consumer Protection, Chapter 344, *Stationary Engineers and Boiler Tenders*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition, 2007 Addendum), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
2. Code addenda and case interpretations accepted automatically.
3. Code rules are updated every two years.
4. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms before installation of all vessels.
5. Special design or construction requires the approval of the department.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: all.
2. ASME Code: all.

Boilers and unfired pressure vessels (except cast-iron boilers) must be shop-inspected and stamped National Board (NB) by an inspector holding a National Board Commission.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Boilers, unfired pressure vessels and refrigerating systems, except the following:

1. Boilers subject to federal government inspection and control.
2. Boilers on railroad locomotives.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure and process boilers:
 - a. One periodic internal inspection;
 - b. One periodic external inspection.
2. Low-pressure boilers:
 - a. One periodic external inspection;
 - b. Internal inspection as required by the inspector.
3. Unfired pressure vessels: One periodic external inspection.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of department inspections.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months or until the next periodic inspection, is issued by the department.

MUNICIPAL FEES

1. Permit fees, including first-inspection fees, vary from \$45.00 to \$160.00 for boilers and unfired pressure vessels.
2. Periodic inspection fees vary from \$45.00 to \$85.00.

MISCELLANEOUS

1. Repairs to boilers and unfired pressure vessels must be made by licensed boiler repair contractors.
2. Operators of high-pressure boilers are required to be licensed.

COLORADO



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STATE DEPARTMENT

Steve Nelson, Chief Boiler Inspector
Department of Labor and Employment
Division of Oil and Public Safety - Boiler Section
633 17th Street
Suite 500
Denver, CO 80202

Telephone — 303.318.8484
Email — steve.v.nelson@state.co.us
Fax — 303.318.8534

EMPOWERMENT

Department of Labor and Employment empowered to make, alter, or amend rules and regulations.
Chief Inspector may grant variances and may adopt ASME Code Cases.
Boiler Board: No.

DATE OF LAW PASSAGE: 1911

Date of latest amendment to law: May 2012.
Date rules and regulations implemented: 1968.
Date of latest amendment to rules and regulations: June 2013.
State statute: Colorado Revised Statutes, Title 9. Safety — Industrial and Commercial, Article 4. Buildings and Equipment, *Boiler Inspection*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition), Sections I, IV, V, VIII (Divisions 1, 2, and 3), IX, X
2. ASME CSD-1 (2009 Edition).
3. ASME B31.1 (2010 Edition).
4. A copy of the *Manufacturer's Data Report* must be filed with the department on ASME forms through the National Board before installation.
5. *National Board Inspection Code* (2011 Edition).
6. National Board registration required for all boilers, including reinstalled and second-hand, with the exception of cast-iron and nonstandard boilers.
7. National Board registration required for fired and unfired pressure vessels with the exception of the following:
 - a. Vessels installed or reinstalled prior to April 30, 1999;
 - b. Vessels built to Section VIII of the ASME Code bearing the "UM" symbol prior to January 1, 2003.
8. API-510 (9th Edition, Addenda 1 through 3), API 570 (2nd Edition, Addenda 1, 2, 3 & 4) are acceptable for inspection and repairs in lieu of National Board Inspection Code for chemical and petroleum industries only.
9. NFPA 85, *Boiler and Combustion Systems Hazard Code*, 2007 Edition.
10. Special design or construction requires approval of the Division of Labor.
11. Foreign codes: Special design or construction requires approval of the Division of Labor and must be registered with the National Board. Contact the chief boiler inspector.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

All boilers shall be labeled with a Colorado serial number preceded by the letters "COLO."

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers owned or operated by the federal government.
2. Locomotive boilers of carriers subject to *Federal Locomotive Inspection Act*.
3. Boilers located in private residences and in apartment houses having fewer than six families.
4. Boilers in any city where city boiler inspectors, record-keeping, and inspection codes are comparable to the state program.
5. Service and domestic-type water heaters that are:
 - a. Less than 200,000 BTU per hour input;
 - b. Less than 120 gallons;
 - c. Operated at less than 210°F.
6. Vessels having an internal or external operating pressure less than 15 psi with no limitation on size.
7. Vessels having an inside diameter not exceeding 6 inches with no limitation on pressure.
8. Vessels containing water under pressure, including those containing air, the compression of which serves as a cushion, with design pressure less than 30 psi and design temperature less than 210°F.
9. A hot-water supply storage tank heated by steam or other indirect means when none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water-containing capacity of 120 gallons.
10. Boilers and pressure vessels under federal control or regulation.
11. Locomotive boilers used exclusively for a personal hobby.
12. Any other pressure vessel exempted in scope of ASME Code Section VIII, Division 1.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except pressure vessels. All new and re-installed boilers require application to be submitted to the Boiler Inspection Section prior to installation. The application is available on the Colorado Boiler Inspection website.

INSPECTIONS REQUIRED

Boilers:

Power boilers and high-temperature water boilers shall receive a certificate inspection annually. Such boilers where construction permits shall also receive an internal inspection annually, or when the inspector deems necessary. The internal inspection frequency may be extended to triennially with prior approval from the Boiler Division.

Low-pressure boilers, water heaters, and direct-fired jacketed steam kettles shall receive a certificate inspection biennially with an internal inspection for low pressure steam boilers, where construction permits, at least every two years, or when the inspector deems necessary.

Pressure Vessels:

1. ASME Code vessels (except those exempted above). A pressure vessel shall be considered to be suitable for use in Colorado if it bears ASME Code stamping. Newly installed vessels must be registered with the National Board.
2. A non-ASME Code pressure vessel shall not be continued in service until certified by the Boiler Inspection Section of the Division of Oil and Public Safety.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the division are accepted in lieu of inspections made by a division inspector, except that the first certificate inspection of a new or reinstalled boiler must be performed by a division inspector.
2. Reports of inspections must be filed with the Division by entering data into the Division's Web-based inspection entry program or by electronic transfer of data within 30 days. Notification of suspension of insurance due to dangerous conditions, new business and discontinuance of insurance must also be reported to Boiler Inspection Section within 30 days
3. Owner-User Inspection Organizations - Any person, firm, partnership, or corporation operating boilers and/or pressure vessels in this jurisdiction may seek approval and registration as an owner/user inspection organization by filing an application with the director on prescribed forms. Contact the Colorado Boiler Section Program Manager for additional information.

CERTIFICATE OF INSPECTION

Upon receiving a favorable report on inspection of any pressure vessel and payment of fee assessed, a certificate will be issued by the Boiler Inspection Branch of the Division of Labor.

MISCELLANEOUS

1. *Reciprocal Commission* is issued without charge to insurance inspectors holding a *National Board Commission*. This *Reciprocal Commission* is issued upon application to the division together with a photostatic copy of commission from the National Board. An interview may be required with the chief inspector. Annual renewal is required.
2. A National Board "R" stamp is required to repair boilers and pressure vessels.
3. A copy of the *Boiler and Pressure Vessel Rules and Regulations* may be obtained at the division's Web site.
4. For additional information regarding inspections and fees please visit the Colorado Boiler Division website.

CONNECTICUT



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STATE DEPARTMENT

Office of the State Building Inspector
Division of Construction Services
Department of Administrative Services
Bureau of Boilers
165 Capitol Avenue, Room 266
Hartford, CT 06106

Telephone — 860.713.5880
Fax — 860.713.7422

EMPOWERMENT

Commissioner empowered to formulate rules and regulations and amendments thereto.
Boiler Board: No.

DATE OF LAW PASSAGE: 1864

Date of latest amendment to law: July 2011.
Date regulations implemented: 1954.
Date of latest amendment to regulations: July 2011.
State statute: Connecticut General Statutes, Chapter 540, *An Act Concerning Boiler Inspection*, Sections 29-231 through 29-244.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (latest automatically adopted), Sections I, II, III (Division 1), IV, V, VI, VII, IX, and code cases.
2. ASME CSD-1 (1998 Edition).
3. *National Board Inspection Code* (1998 Edition, 2000 Addendum).
4. National Board registration required for boilers.
5. Boilers must be shop-inspected by an inspector holding a Connecticut commission, except boilers constructed outside the state, which may be shop-inspected by an inspector holding a *National Board Commission*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, NV, PP, S, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and water heaters within the scope of Section I and Section IV of the ASME Code, except the following:

1. Boilers under federal control.
2. Portable boilers used in pumping, heating, steaming, and drilling in the open field.
3. Portable boilers used solely for agricultural purposes.
4. Steam-heating boilers, hot-water heaters, and hot-water heating boilers, when used in private homes or

apartment houses of not more than five families.

5. Hot-water heaters approved by a nationally recognized testing agency:

- a. Equipped with adequate safety devices including a temperature and pressure relief valve;
- b. Having a nominal water capacity of not more than 120 gallons;
- c. Having a heat input of not more than 200,000 BTU per hour;
- d. Used solely for hot-water supply carrying a pressure of not more than 160 psi;
- e. Operated at temperatures of not more than 210°F provided that such heaters are not installed in schools, day-care centers, public or private hospitals, nursing or boarding homes, churches, or public buildings, as defined in section 1.1.

6. Antique or model boilers used in public, nonprofit engineering, or scientific museums operated for educational, historical, or exhibition purposes (having a shell diameter of less than 12 inches and a grate surface area of less than one square foot).

7. Public service companies as defined in *Connecticut General Statutes* (Section 16-1).

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, plus water heaters in public buildings, regardless of size or BTU rating.

INSPECTIONS REQUIRED

Power boilers:

1. One annual internal and external inspection.
2. One annual external inspection under operating conditions not more than six months after the internal and external inspection.

Power boilers that operate with internal water treatment under the direct supervision of a qualified engineer:

1. One internal and external inspection every eighteen months while not under pressure.
2. One external inspection under operating conditions not more than nine months after the external and internal inspection.

Low-Pressure Boilers

Low-pressure steam boilers, hot-water heating boilers, hot-water supply boilers, and hot water heaters; an external biennially, with an internal at the discretion of the inspector.

Internal and external certificate inspections to be filed with the department within 30 days of inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of internal and external inspections shall be reported immediately in every instance when hazardous conditions are found.
3. The department must be notified of *suspension of insurance on account of a hazardous condition*.
4. The department must be notified within 30 days of *new business* and *discontinuance of insurance*.

CERTIFICATE OF OPERATION

1. A *Certificate of Operation* for a power boiler, valid for 12 months, is issued by the department upon payment of a \$80.00 fee to the department.
2. A *Certificate of Operation* for low-pressure boilers and hot-water heaters, valid for 24 months, is issued by the department upon the payment of a \$80.00 fee to the department.
3. Any operating certificate shall be immediately invalid if the boiler is relocated or altered, unless such relocation or alteration has been approved in accordance with the boiler code and regulations.
4. No fee shall be required of the state or any agency of the state.

DELAWARE



STATE DEPARTMENT

David Small, Secretary

John J. Esch, Chief Inspector

Department of Natural Resources and Environmental Control
DNREC, Boiler Safety
391 Lukens Drive
New Castle, DE. 19720

Telephone — 302.395-2500

Email — John.Esch@state.de.us

Fax — 302.395-2555

EMPOWERMENT

Boiler Safety Program empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1919

Date of latest amendment to law: July 2011.

Date rules and regulations implemented: 1925.

Date of latest amendment to rules and regulations: 2013, Fees are expected to change in 2015

State statute: Delaware Code, Title 7 Conservation Chapter 74B.

Department of Natural Resources and Environmental Control, Section 7401B Boiler Safety Program.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition), Sections I, II, III (Divisions 1, 2), IV, V, VIII (Divisions 1, 2, 3), IX, X, XI, and code cases.
2. ASME CSD-1 (Current Edition).
3. ASME B31.1 (Current Edition).
4. ASME PVHO-1 (Current Edition).
5. A copy of the *Manufacturer's Data Report* must be filed with the program on ASME forms through the National Board before boilers or pressure vessels are shipped into Delaware.
6. *National Board Inspection Code* (Current Edition).
7. National Board registration required for boilers, (except Cast Iron & Cast Aluminum) and pressure vessels.
8. Special design or construction requires prior approval by Chief Inspector.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol and designator are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

All boilers and pressure vessels shall be assigned a Delaware state number at the time of first inspection.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except those listed below:

1. Any boiler or pressure vessel which is subject to federal inspection and control.

2. Any pressure vessel used for the transport or storage of compressed gases and liquids under the control or regulation of the US Department of Transportation.
3. Any air tank on any vehicle used for carrying passengers or freight and operated under the authority of any other state agency.
4. Any air tank installed on the right-of-way of railroads.
5. Any unfired pressure vessel not exceeding:
 - a. 5 cubic feet in volume and up to 250 psig design pressure;
 - b. 3 cubic feet in volume and 350 psig design pressure;
 - c. 1-1/2 cubic feet in volume and up to 600 psig design pressure;
 - d. Vessels having an inside diameter, width, height, or cross section diagonal not exceeding 6 inches with no limitation on length.
6. Any unfired pressure vessel having an internal and/or external operating pressure not exceeding 15 psig.
7. Any unfired pressure vessel containing water at ambient temperature with a nominal water-containing capacity of 120 gallons or less, including those with air or gas cushion, the compression of which serves only as a cushion.
8. Any water filter or softener containing water at ambient temperature when the pressure does not exceed 300 psig.
9. Any pressure vessel under the control of the state fire marshal.
10. High pressure breathing air cylinders used by emergency response organizations are exempt from inspection and certification provided they are installed, serviced, and maintained in accordance with the manufacturer's recommendations and the National Fire Prevention Association Standards, and the owner or user of this equipment shall be responsible for maintaining, testing and servicing this equipment and shall keep all records associated with these activities as required by National Fire Protection Association Standards. The failure of any person to so install, service, test and maintain these cylinders and to keep such records shall constitute a violation of this chapter.
11. Any water heater, directly fired with oil, gas, or electricity, which shall be equipped with ASME-stamped safety relief valves, cannot exceed any of the following limitations:
 - a. Heat input of 200,000 BTU per hour or 58,600 watts;
 - b. Water temperature of 210°F;
 - c. Nominal water capacity of 120 gallons.
12. Any coil-type hot-water boiler without any steam space where water flashes into steam when released through a manually operated nozzle, unless one of the following limitations is exceeded:
 - a. A 3/4-inch diameter tubing or pipe size, with no drum or headers attached;
 - b. Nominal water-containing capacity does not exceed 6 gallons;
 - c. Water temperature does not exceed 350°F;
 - d. Steam is not generated within the coil.

Notwithstanding any provision to the contrary, any heating and hot-water supply boiler located in an apartment complex or residence of six or fewer living units, or any heating or hot-water supply boiler used to heat a single unit, where the heat input does not exceed 100,000 BTU per hour, shall be exempt from field inspection only.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following: Heating boilers, hot-water supply boilers, water heaters, and pressure vessels located in buildings which are solely used for residential purposes and which have accommodations not exceeding six family units or any heating or hot-water supply boiler used to heat a single unit, where the heat input does not exceed 100,000 BTU per hour.

INSPECTIONS REQUIRED

1. Power boilers, miniature boilers, and high-pressure, high-temperature water boilers:
 - a. Annual internal inspection;
 - b. Annual external inspection while under pressure. The external (inservice) inspection should be done within six months of the internal inspection.
2. Low-pressure steam heating boilers, hot-water heating boilers, and hot-water supply boilers: biennial external inspection.
3. Pressure vessels: biennial or every four years as determined by the inspector.

4. For installations using nuclear fuel as a source of power, the inspection frequency shall be determined by making application to the Boiler Safety Program.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors, employed by insurance companies or a Non-traditional Inspection Agency accredited by National Board-369 and approved by The State of Delaware, commissioned by the program are accepted in lieu of inspections made by a program inspector.
2. Reports of certificate inspections must be filed with the program on National Board forms, or filed electronically, within 30 days.
3. Reports of non-certificate external inspections are not required unless there are dangerous conditions.
4. The program must be notified immediately of *suspension of insurance on account of dangerous conditions*.
5. The program must be notified within 30 days of *new business* and *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 24 months for all boilers and for 24 or 48 months for pressure vessels, is issued by the program upon payment of an annual \$7.50 fee for each object reported. This fee shall be paid to the DNREC Boiler Safety and sent directly to the office by the owner or user at the time of invoice receipt.

STATE FEES

1. Power boilers and high-pressure, high-temperature hot-water boilers:
 - a. Internal inspection:
 - i. under 5 hp - **\$15.00**
 - ii. 5 hp up to 99 hp - **\$25.00**
 - iii. 99 hp to 200 hp - **\$35.00**
 - iv. Over 200 hp: On an hourly basis with a minimum of - **\$50.00**
 - b. External inspection - **\$15.00**
 - c. Heating boilers, hot-water supply boilers:
 - i. Without manhole - **\$15.00**
 - ii. With manhole - **\$25.00**
 - d. Water heaters - **\$10.00**
 - e. Pressure vessels:
 - i. 50 square feet or less - **\$10.00**
 - ii. Each additional 100 square feet or fraction thereof - **\$20.00**

A group of pressure vessels such as paper machine rolls or dryers operating as a single machine or unit shall be considered as one pressure vessel.

2. Shop reviews: A fee of \$1,500.00 per review, requires a team leader and if available, team member to be present. A fee of \$800.00 per review, if only National Board authorization to repair or alter ASME-stamped boilers and pressure vessels is requested.
3. Nuclear inspection: Check with the Boiler Safety Program.
4. Hydrostatic tests: When it is necessary to make a special trip to witness the application of a hydrostatic test, the fee for such service shall be based on the actual hourly inspection time including travel. The entire expense of applying the hydrostatic test shall be borne by the owner/user.

MISCELLANEOUS

1. Permission to make repairs by fusion welding must be obtained from a Delaware commissioned inspector. A record of welded repair must be filed with the program by the company making the welded repair.
2. Field inspections must be made by an inspector holding a Delaware commission.
3. Examinations for Delaware inspector commissions are held by the program upon request. An examination fee of \$50.00 is charged.
4. The examination fee for a *Certificate of Competency* or a *National Board Commission* is \$75.00 within inspection area; \$150.00 out of inspection area.

5. Commission credential cards issued by the program shall expire biennially. Renewal fee is \$25.00.
6. Boiler operators are required to be licensed in the City of Wilmington.
7. A copy of Title 7 and boiler and pressure vessel rules and regulations may be obtained by accessing <http://www.dnrec.delaware.gov/BoilerSafety/Pages/Default.aspx>.

DETROIT, MICHIGAN



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MUNICIPAL DEPARTMENT

Cortney Jackson, Supervisor, Boiler Division
Buildings, Safety Engineering and Environmental Department
Coleman A. Young Municipal Center
2 Woodward Ave., Suite 408
Detroit, MI 48226

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Email — Jacksonco@detroitmi.gov
Fax — 313.628.2635

EMPOWERMENT

Board of Rules of the Department of Buildings and Safety Engineering empowered to make, alter, amend rules and regulations (limited to interpretation of ordinances), and establish fees on boilers and pressure vessels.
Boiler Board: No.

DATE OF LAW PASSAGE: 1881

Date of latest amendment to law: December 1983.
Date rules and regulations implemented: 1881.
Date of latest amendment to rules and regulations: December 1983.
City ordinance: City of Detroit Municipal Code, Chapter 11. Building and Safety Regulations, 705-G. *Boilers and Pressure Vessels*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X
2. Code rules updated as needed.
3. *Manufacturer's Data Reports* shall be filed with the department through the National Board.
4. National Board registration required for boilers and pressure vessels.
5. Special design or construction requires approval of the director, Department of Buildings and Safety Engineering.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: none.
2. ASME Code: all.

All boilers and pressure vessels shall be stamped with a City of Detroit issued serial number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers under federal government control.
2. Boilers located on railroad locomotives.
3. Pressure vessels bearing a valid US Department of Transportation stamp and used only in transit service.

4. Pressure vessels used for storage of compressed air and attached as an auxiliary on locomotives, street or railway cars, water-borne craft, or motor vehicles.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Steam boilers with operating pressure of 15 psi or less, and hot-water heating and supply boilers with operating pressure of 160 psi or less (not exceeding a temperature of 250°F), providing the heating surface does not exceed 300 square feet.
2. Pressure vessels that do not exceed a working pressure of 30 psi.
3. Water tanks.

INSPECTIONS REQUIRED

1. Boilers – high pressure:
 - a. One annual internal inspection;
 - b. One annual external inspection.
2. Boilers – low pressure:
 - a. One biennial internal inspection;
 - b. One biennial external inspection.

Inspections to be done in alternate years.
3. Pressure vessels:
 - a. One biennial internal and external inspection;
 - b. Unfired and unheated pressure vessels: Internal inspection made only when deemed necessary by department.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted for unfired pressure vessels only, in lieu of inspections made by a department inspector.
2. First inspections of new installations must be made by a department inspector.
3. Inspection reports must be filed with department within 10 days on National Board forms or on forms furnished by department.
4. Department must be notified on National Board forms when insurance is *suspended due to dangerous conditions*.

CERTIFICATE OF INSPECTION

Boilers only.

MUNICIPAL FEES

1. Annual fees:
 - a. Boilers up to and including 20 square feet of heating surface - **\$75.00**
 - b. Boilers more than 20 square feet and not exceeding 100 square feet of heating surface - **\$125.00**
 - c. Boilers more than 100 square feet and not exceeding 1,000 square feet of heating surface - **\$156.00**
 - d. Boilers more than 1,000 square feet and not exceeding 5,000 square feet of heating surface - **\$205.00**
 - e. Boilers more than 5,000 square feet and not exceeding 15,000 square feet of heating surface - **\$525.00**
 - f. Boilers more than 15,000 square feet of heating surface - **\$854.00**
 - g. Heated, unfired pressure vessels - **\$123.00**
2. Biennial fees:

For inspections of unfired & unheated pressure vessels at same location and conducted by department:

- a. For each of the first five vessels not exceeding 16 inches in diameter - **\$80.00**

- b. For each additional vessel not exceeding 16 inches in diameter - **\$66.00**
- c. For each of the first five vessels over 16 inches in diameter but not exceeding 36 inches in diameter - **\$109.00**
- d. For each additional vessel over 16 inches in diameter but not exceeding 36 inches in diameter - **\$73.00**
- e. For each vessel over 36 inches in diameter - **\$131.00**
- f. For inspections of pressure vessels conducted by duly recognized insurance companies (per vessel) - **\$63.00**

Refer to the department for installation fees. All fees are payable to the city treasurer through the department.

MISCELLANEOUS

1. Examinations for commissions are held by the department upon written request by the inspector, provided need for commission is substantiated in writing by inspector's employer. No examination fee is required.
2. Permit for installation or repair of boilers and pressure vessels must be obtained from the department.
3. Operators of low-pressure boilers over 300 square feet, hot-water boilers over 1,000 square feet (aggregate), and all high-pressure boilers are required to be licensed by the City of Detroit.

FLORIDA



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STATE DEPARTMENT

Julius Halas, Director, Division of State Fire Marshal

Bureau of Fire Prevention
Boiler Safety Section
Division of State Fire Marshal
200 East Gaines Street
Tallahassee, FL 32399-0342

Telephone — 850.413.3723
Fax — 850.414.6119

EMPOWERMENT

The Boiler Safety Program empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1987

Date of latest amendment to law: July 2000.
Date rules and regulations implemented: 1989.
Date of latest amendment to rules and regulations: May 2012.
State statute: Florida Statutes, Title 33. Regulations of Trade, Commerce, Investments and Solicitations, Chapter 554. *Boiler Safety*, Sections 101.1 through 115.0.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1998 Edition, 1999 Addendum), Sections I, II, IV, V, VI, VII, IX
2. ASME CSD-1 (1998 Edition, 1999 Addendum).
3. ASME B31.1 (1998 Edition, 1999 Addendum).
4. A copy of the *Manufacturer's Data Reports* on ASME forms must be filed with the chief inspector not more than 90 days following the inservice inspection date of the boiler. Manufacturer's Data Reports for welded power piping within the scope of Section I must be filed with the chief inspector.
5. *National Board Inspection Code* (1998 Edition, 1999 Addendum).
6. Special design or construction requires approval by the bureau.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, S, V.

Repairs to all boilers shall conform to the National Board Inspection Code or a program authorized by the Boiler Safety Program.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and lined hot-water storage heaters, except the following:

1. Boilers and lined hot-water heaters under the control of the federal government.
2. The provisions of this chapter shall not apply to HLW hot-water supply boilers or lined storage water heaters which are directly fired with oil, gas, electricity, or solar energy, provided that none of the following limitations are exceeded:
 - a. Heat input of 400,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water-containing capacity of 120 gallons.

These exempt hot-water supply boilers and lined storage water heaters shall be equipped with safety relief valves conforming to the requirements of the *ASME Boiler and Pressure Vessel Code* and the NBIC.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

All boilers and nonexempt lined hot-water storage heaters when located in public assembly locations.

INSPECTIONS REQUIRED

1. Power boilers and high-temperature water boilers:
 - a. Certificate inspection annually;
 - b. External inspection while under pressure;
 - c. Internal inspection if the construction so permits.
2. Low-pressure steam or vapor heating boilers:
 - a. Certificate inspection biennially;
 - b. Internal inspection if the construction so permits.
3. Hot-water heating and hot-water supply boilers:
 - a. Certificate inspection biennially;
 - b. Internal inspection every four years if the construction so permits.

INSURANCE INSPECTION REQUIREMENTS

Insurance companies are required to do inservice inspections of all insured boilers that are located in areas of public assembly. A written report on each certificate inspection shall be filed with the chief boiler inspector within 15 days following the inspection. Upon filing a report of satisfactory inspection, the boiler is exempt from inspection by the *Boiler Safety Program*.

CERTIFICATE OF INSPECTION

Certificate of Compliance is issued by the department upon payment of a fee by the owner. The certificate for a power boiler or high-pressure, high-temperature water boiler is valid for a period of 12 months. The certificate for a heating boiler or hot-water supply boiler is valid for a period of 24 months.

STATE FEES

For a *Certificate of Competency*, the initial application fee shall be \$50.00 and the annual renewal fee shall be \$30.00. Examination fee for a Certificate of Competency shall be \$50.00.

Certificate inspections conducted by the bureau:

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. 4,000 square feet heating surface or less - **\$60.00**
 - b. More than 4,000 but less than 10,000 square feet heating surface - **\$70.00**
 - c. 10,000 square feet or more heating surface - **\$90.00**
2. Heating boilers with manhole - **\$70.00**
3. Heating boilers without manhole - **\$40.00**
4. Hot-water supply boilers - **\$40.00**
5. For issuance of a *Certificate of Compliance* without department inspection - **\$30.00**

MISCELLANEOUS

A license is not required to operate boilers.

Pressure vessels must be designed and stamped per ASME BPVC Section VIII unless excepted.. Enforcement of these requirements do not fall under the division of state fire marshal. Further details can be found described in the Florida Building Code Mechanical Chapter 10 (See http://floridabuilding.org/bc/bc_default.aspx).

GEORGIA



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STATE DEPARTMENT

Ralph Hudgens, Commissioner

Benjamin Crawford, Chief Engineer
Office of Insurance and Safety Fire Commissioner
2 Martin Luther King Jr. Drive
West Tower, Suite 920
Atlanta, Georgia 30334

Telephone — 404.463.0726
Email — bcrawford@sfm.ga.gov
Fax — 404.679.5818

EMPOWERMENT

Director of Safety Engineering Division empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1969

Date of latest amendment to law: July 1993.
Date rules and regulations implemented: 1986.
Date of latest amendment to rules and regulations: April 6, 2015.
State statute: Official Code of Georgia Annotated, Title 25. Labor, Chapter 15 Article 2. *Regulations of Boilers and Pressure Vessel Safety Act*, Chapter 120-3-26. Georgia Boiler and Pressure Vessel Rules.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition, current approved Addendum), Sections I, III (Divisions 1, 2), IV, VIII (Divisions 1, 2, 3), X, XI, and code cases.
2. ASME CSD-1 (2012 Edition).
3. ASME B31.1 (as adopted by ASME Section I).
4. ASME PVHO-1 (2007 Edition).
5. *National Board Inspection Code* (2013 Edition)
6. National Board registration required.
7. NFPA Sections 31 (2006 Ed.), 54 (2012 Ed.), 58 (2014 Ed.), 70 (2011 Ed.), 85 (2011 Ed.), 211 (2013 Ed.).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, NV, PP, RP, S, U, U2, U3, UM, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels installed after April 21, 1986, except the following:

1. Boilers and pressure vessels under federal control.
2. US Department of Transportation pressure vessels used for the transportation and storage of compressed or

liquefied gases.

3. Unfired pressure vessels on vehicles operated under rules of other states or federal agencies.
4. Air tanks installed on railroad rights-of-way and used directly in the operation of trains.
5. Unfired pressure vessels that do not exceed 5 cubic feet in volume, or 250 psig and 1-1/2 cubic feet in volume, or 600 psig and over 6 inches in size.
6. Unfired pressure vessels having an external or internal working pressure not exceeding 15 psig.
7. Unfired pressure vessels that do not exceed 6 inches inside diameter.
8. Unfired pressure vessels containing water heated by steam or other indirect means, and directly fired hot-water supply boilers or heaters, when none of the following is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Normal water-containing capacity of 120 gallons.
9. Boilers and pressure vessels operated and maintained by public utility.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers and pressure vessels located on farms and used solely for agricultural or horticultural purposes.
2. Heating boilers or pressure vessels which are located in private residences or in apartment houses of fewer than six family units.
3. Any pressure vessels used as an external part of an electrical circuit breaker or transformer.
4. Pressure vessels on remote oil or gas production lease locations that have fewer than 10 buildings intended for human occupancy per 0.25 square miles and where the closest building is at least 220 yards from any vessel.
5. Pressure vessels used for the storage of liquid propane gas under the jurisdiction of the state fire marshal, except for pressure vessels used for storage of liquid propane gas that are 2,000 gallons or above and have been modified or altered.
6. Air storage tanks not exceeding 16 cubic feet (120 gallons) in size and under 250 psig pressure.

INSPECTIONS REQUIRED

1. Power and high-temperature water boilers shall receive a certificate inspection annually, internal inspection where construction permits, otherwise it shall be as complete an inspection as possible. Such boilers shall also be inspected externally while under operation pressure.
2. Low-pressure steam and vapor boilers shall receive a certificate inspection biennially with an internal inspection quadrennially where construction permits.
3. Hot-water heating and hot-water supply boilers shall receive a certificate inspection biennially with an internal inspection at the discretion of the inspector.
4. Hot-water heaters over 200,000 BTU per hour or 120 gallon capacity.
5. Pressure vessels subject to internal corrosion shall receive a certificate inspection triennial with an internal inspection at the discretion of the inspector. All other pressure vessels shall be inspected at intervals set by the board, with at least a quadrennial certificate inspection. Pressure vessels that are fired with gas, oil, or other means, such as electricity, are considered boilers and inspected as required above.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by the department. Reports of inspections must be filed with the department within 30 days following each inspection on forms as promulgated by the commissioner.
2. The department must be notified of *new business* or *discontinuance of insurance* within 30 days. *Suspension of insurance* or *refusal to issue an operating permit due to unsafe conditions* requires immediate notification of the chief engineer with a copy of the inspection report.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection* is issued by the department. This inspection certificate is valid for not more than 12 months for high-pressure power boilers; 24 months for low-pressure heating boilers, hot-water supply boilers, and heaters; and 36 months for pressure vessels. Each certificate has a 60-day grace period.
2. Owner/user inspection organizations approved by the chief safety engineer shall maintain in their files an

inspection record which shall list – by number and abbreviated description as may be necessary for identification – each pressure vessel, date of the last inspection and date of the next scheduled inspection. The inspection records shall be available for examination by the chief safety engineer or his designee. The owner/user inspector is required to file a report of inspection, as specified for the insurance inspections.

STATE FEES

1. Special inspections: A \$100.00 per hour fee is charged for each special inspection by a department inspector, plus all traveling expenses related to the inspection. Special inspection: Any inspection performed by the department inspectors that is not a routine, regularly scheduled certificate inspection.
2. Certificate inspection by state inspector (boilers and/or hot-water heaters):
 - a. Up to and including 30 boiler hp - **\$30.00**
 - b. 31 boiler hp to 50 boiler hp - **\$50.00**
 - c. 51 boiler hp to 100 boiler hp - **\$75.00**
 - d. 101 boiler hp to 200 boiler hp - **\$100.00**
 - e. Over 200 boiler hp - **\$150.00**
3. Operating certificate fees:
 - a. High-pressure boilers (1 year) - **\$50.00**
 - b. Low-pressure boilers and water heaters (2 years) - **\$50.00**
 - c. Unfired pressure vessels (3 years) - **\$30.00**
4. Special fees:
 - a. State special design - **\$500.00**
 - b. State joint review - **\$1,500.00 (done by National Board)**
5. Installation fees for boilers and hot-water heaters:
 - a. Up to and including 30 boiler hp - **\$100.00**
 - b. 31 boiler hp to 50 boiler hp - **\$200.00**
 - c. 51 boiler hp to 100 boiler hp - **\$300.00**
 - d. 101 boiler hp to 200 boiler hp - **\$400.00**
 - e. Boilers and hot-water heaters over 200 boiler hp - **\$500.00**

Installation fees double when boilers or hot-water heaters are installed without a permit. Installation fee covers one installation inspection.

MISCELLANEOUS

1. Prior approval by an inspector of each repair or alteration is required. Repair organizations shall provide the chief safety engineer with a copy of the completed repair form, with the inspector's signature, for all repairs.
2. Repairs, resetting, or re-calibrating of any safety valve or safety relief valve shall be made by an organization holding the National Board "VR" stamp, or by an owner/user maintenance organization approved by the chief safety engineer.
3. Examination for a *Certificate of Competency* for an insurance company inspector or owner/user organization is administered by the department upon payment of a \$50.00 fee for each examination.
4. Renewable and reciprocal commissions are issued for a fee of \$25.00 and are based on the possession of a valid *National Board Commission*.
5. All companies performing boiler installations, maintenance or service shall have a *Certificate of Authority* for the scope of work performed, issued by the Safety Engineering Division. This certificate is required to be renewed every two years. The issue and renewal fee is \$50.00. All companies must show qualification either by experience or by examination to receive the *Certificate of Authority*.
6. All contractors must have a *Certificate of Authority* to install, maintain and/or service boilers.
7. Locations (except for industries) that perform their own boiler installation, maintenance, and/or service, using their people on their equipment, also need a *Certificate of Authority*. These include places of assembly, businesses, educational or institutional facilities, mercantiles, and R-1 or R-2 residential units (as described in the *Standard Building Code*).

HAWAII



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STATE DEPARTMENT

Julius J. Dacanay, Manager and Chief Boiler Inspector
Hawaii Department of Labor and Industrial Relations
Division of Occupational Safety and Health
Boiler and Elevator Inspection Branch
830 Punchbowl Street, Room 425
Honolulu, HI 96813

Telephone — 808.586.9144
Fax — 808.586.9150
Email — julius.j.dacanay@hawaii.gov

EMPOWERMENT

Director of Department of Labor and Industrial Relations empowered to make, alter, or amend rules and regulations, pursuant to the *Administrative Procedures Act*.
Boiler Board: No.

DATE OF LAW PASSAGE: 1947

Date of latest amendment to law: 2002.
Date rules and regulations implemented: 1982.
Date of latest amendment to rules and regulations: November 18, 2012.
State statute: Statutes of Hawaii, Title 12. Department of Labor and Industrial Relations, Subtitle 8. Division of Occupational Safety and Health, Part 10. *Boilers and Pressure Vessels*, Chapters 220 through 225.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2 & 3), IX, X, XI, and code cases with National Board stamping.
2. ASME CSD-1 (2006 Edition).
3. ASME PVHO-1 (2002 Edition)
4. ASME B31.1 (2010 Edition)
5. NFPA 85 (2001 Edition).
6. NEC (2011 Edition).
7. Code addenda and case interpretations accepted automatically.
8. Installers must apply for a permit to install along with a copy of the Manufacturer's Data Report, plans & drawings, specifications, and any other pertinent information deemed necessary by the department before installation.
9. National Board Inspection Code (2011 Edition).
10. National Board registration required for boilers and pressure vessels.
11. Special design or construction requires approval of director of Department of Labor and Industrial Relations.
12. All pressure vessels forming part of a geothermal energy system shall be:
 - a. Fabricated in accordance with the provisions of ASME Code, Section I or Section VIII, Division 1 or Division 2, as applicable;
 - b. Fabricated by a manufacturer who has a valid ASME Certificate of Authorization.

c. Registered with the National Board.

Stamping:

Where appropriate, the following National Board stamps and/ or ASME Code Certification Mark and designators are required:

1. National Board: R, VR.
2. ASME Certification Mark
3. The following ASME Designators: A, E, H, HLW, HV, M, PP, S, U, UM, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal inspection and control.
2. Unfired pressure vessels meeting the requirements of the US Department of Transportation and used for transporting liquids or gases under pressure.
3. Containers for storage of liquefied compressed flammable gases under the jurisdiction of other agencies.
4. Unfired pressure vessels with a nominal water-containing capacity of 120 gallons or less for containing liquid under pressure, including those containing air, the compression of which only serves as a cushion.
5. Hot-water supply boilers and hot-water heating boilers which are directly fired with oil, gas, or electricity, when none of the following limitations are exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. A nominal water-containing capacity of 120 gallons, except that such hot-water supply boilers shall be equipped with a proper size, type and capacity safety relief valve as set forth in Section IV of the *ASME Boiler and Pressure Vessel Code*;
 - d. An operating pressure not exceeding 160 psi.
6. Unfired pressure vessels designed for a pressure not exceeding 15 psig.
7. Pressure vessels not exceeding:
 - a. 5 cubic feet in volume and 250 psi design pressure;
 - b. 3 cubic feet in volume and 350 psi design pressure
 - c. 1-1/2 cubic feet in volume and 600 psig pressure;
 - d. An inside diameter of 6 inches with no limitation on pressure.
8. Unfired pressure vessels containing water and filtering material for use in irrigation of land.
9. Unfired pressure vessels for the storage of cold water.
10. Electrically heated sterilizers or steam cookers when neither of the following limitations is exceeded:
 - a. Heat input of 3 kilowatts;
 - b. Volume of 1-1/2 cubic feet.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers, pressure vessels and pressure systems installed in a single family dwelling or multiple dwelling units of less than six living units.
2. Pressure vessels used in refrigeration and air conditioning systems of the vapor compression type.

INSPECTIONS REQUIRED

1. Power boilers, except unfired miniature boilers and those with no steam or hot-water outlet connections:
 - a. An annual internal or permit inspection;
 - b. An annual external inspection.
2. Biennial internal inspections are permitted for power boilers having continuous internal water treatment under qualified supervision upon approval of the director. External inspections shall continue at approximate six-month intervals.

3. The external inspection shall be not less than five months and/or more than seven months from the date of the internal inspection.
4. Heating boilers and power boilers exempted in Item 1 above: a biennial permit inspection.
5. Steam or vapor boilers: a biennial external inspection and an internal inspection where construction permits.
6. Hot-water heating and hot-water supply boilers: a biennial external inspection and an internal inspection at the inspector's discretion, where construction permits.
7. Pressure vessels: a biennial permit inspection; however, an internal inspection is not required for vessels whose contents are noncorrosive.

INSURANCE INSPECTION REQUIREMENTS

Insurance companies are required to inspect all insured objects that fall under the scope of these standards. Inspection reports shall be submitted within thirty days from the date of the inspection. If during a routine inspection, a pressure retaining item is found to have discrepancies, the length of time for temporary use of such item will be at the discretion of the special inspector but no more than 90 days. A follow up inspection shall be made by the special inspector in a timely manner and the department notified. Follow up inspections not performed by the special inspector within the time period prescribed may be conducted by the department and such authorized inspection agency will be invoiced at \$100.00 per hour with a minimum charge of 2 hours per visit.

CERTIFICATE OF COMPETENCY

On application and payment of appropriate fee, a written examination shall be given to qualified applicants. If the applicant is successful in meeting all requirements, a Certificate of Competency shall be issued by the department. An applicant who fails to pass the examination shall be permitted to take another written examination after the expiration of ninety days. The Certificate of Competency, unless suspended, revoked, or cancelled, shall expire one year from the date of issue or renewal.

CERTIFICATE OF INSPECTION

Permit to Operate is issued, valid for 12 months for power boilers and 24 months for heating boilers and pressure vessels. Some pressure vessels are granted four-year permits based on design, application or use. Some steam heating boilers are issued 12 months of operating permit depending on their sizes.

STATE FEES

Boiler and Pressure Vessel Installation, Repair or Alteration Permit Fees:

1. Power boilers (shall pass a hydrostatic test unless indicated):
 - a. Miniature electric (no hydro required) - **\$190.00**
 - b. Less than 500 square feet of heating surface - **\$250.00**
 - c. Greater than or equal to 500 and less than or equal to 3000 square feet of heating surface - **\$400.00**
 - d. Greater than 3000 square feet of heating surface - **\$750.00**
2. Heating boilers:
 - a. New Installation - **\$190.00**
 - b. Retrofit - **\$160.00**
3. Pressure vessels:
 - a. New Installation - **\$175.00**
 - b. Retrofit- **\$130.00**
4. Sterilizers and steam kettles:
 - a. New Installation - **\$150.00**
 - b. Retrofit - **\$110.00**
5. Repair Application Fee - **\$200.00**
6. Alteration Application Fee- **\$500.00**

Examination and License Fees

1. Boiler inspector's certificate of competency examination - **\$300.00**
2. Review of shops and facilities for the issuance of National Board or ASME Certificates of Authorization -

\$1,500.00

3. Review of shops and facilities for the issuance of NBEP Certificate of Authorization - **\$750.00**
4. Boiler inspector's Hawaii Commission, initial and renewal - **\$75.00**

Internal and External Inspections Fees

1. Power Boilers:
 - a. Without manholes - **\$150.00**
 - b. With manholes but not over 3,000 square feet of heating surface - **\$180.00**
 - c. Over 3,000 but not over 10,000 square feet of heating surface - **\$260.00**
 - d. Over 10,000 square feet of heating surface - **\$450.00**
2. Heating Boilers
 - a. Hot water supply - **\$130.00**
 - b. Steam and water heating without manholes - **\$110.00**
 - c. Steam over 100 but not over 500 square feet of heating surface - **\$140.00**
 - d. All with manholes and steam over 500 square feet of heating surface - **\$170.00**
3. Pressure Vessels
 - a. Routine Inspection - **\$65.00**
 - b. Internal for air or water service - **\$130.00**
 - c. Ultrasonic testing - **\$130.00**
4. Boiler inspector fee per hour - **\$100.00**
5. Hydrostatic test - **\$300.00**
6. School "specials" (non code objects) - **\$10.00**

Processing Fees:

1. Report and permit processing - **\$25.00**
2. Permit reprint - **\$20.00**
3. Signed permit card (old issue) - **\$10.00**
4. Owner portal - **\$5.00**

Note:

1. The term "heating surface" includes water walls but excludes economizers and superheaters.
2. All other inspections: \$100.00 per hour but not less than \$200.00 per occurrence during regular working hours, and \$150.00 per hour but not less than \$300.00 per occurrence when performed outside regular working hours at the request of the beneficiary.

MISCELLANEOUS

1. When repairs and alterations are to be made, the requirements of the National Board Inspection Code shall apply. Applications for authorization for repair/ alteration with the department prior to commencement of work, shall be filed in the prescribed form along with the payment of applicable fees . A complete application shall include name of the applicant, address, telephone number, "R" stamp number and expiration date. A copy of the manufacturer's data report form shall be submitted along with drawings of the proposed alteration, calculations, materials, procedures and new maximum allowable working pressure and temperature when applicable. The type of equipment shall be identified with pertinent information such as, power boiler, heating boiler or pressure vessel number, National Board number, name of manufacturer and year built. Incomplete, illegible or applications with insufficient data shall not be considered for approval.

IDAHO

STATE DEPARTMENT

Idaho Division of Building Safety
Industrial Safety Section
1310 Hamilton Road
Mountain Home, ID 83647

Telephone — 208.587.3860

EMPOWERMENT

Industrial Commission empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1954

Date of latest amendment to law: July 1985.
Date rules and regulations implemented: 1961.
Date of latest amendment to rules and regulations: March 2010

ILLINOIS



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STATE DEPARTMENT

Michael Vogel, Chief Boiler Inspector
Office of State Fire Marshal
Division of Boiler and Pressure Vessel Safety
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Springfield, IL 62703

Telephone — 217.785.1008
Email — mike.vogel@illinois.gov
Fax — 217.785.4184

EMPOWERMENT

Board of Boiler and Pressure Vessel Rules and Regulations empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1951 (Boilers), 1976 (Pressure Vessels)

Date of latest amendment to law: May 2006.
Date rules and regulations implemented: 1952.
Date of latest amendment to rules and regulations: July 2013.
State statute: Illinois Compiled Statutes, Health and Safety, Chapter 430. Public Safety, Subchapter 75. *Boiler and Pressure Vessel Safety Act*, Sections 1 through 16.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X
2. ASME CSD-1a (2009 Edition).
3. ASME B31.1 (2007 Edition), Section I only.
4. Manufacturers must file a copy of *Manufacturer's Data Report* for boilers and pressure vessels with the National Board.
5. *National Board Inspection Code* (2013 Edition).
6. National Board registration required for boilers and pressure vessels.
7. API-510 (8th Edition, First Supplement).
8. Owner/user pressure vessels shall be inspected in accordance with API-510 when such owner/user organizations are approved by the division.
9. NFPA 85
10. Special design or construction requires approval of *Board of Boiler and Pressure Vessel Rules and Regulations* before construction is started.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, RP, S, U, U2, UM, UV, V. Nuclear stamps N, NA, NPT, NV come under the jurisdiction of the Illinois Emergency Management Agency.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal control, except those located in cities of more than 500,000 inhabitants.
2. Pressure vessels located on vehicles operating under the rules of other state authorities and used for carrying passengers or freight.
3. Pressure vessels installed on the right-of-way of railroads and used directly in the operation of trains.
4. Pressure vessels used for transportation and storage of compressed or liquefied gases when constructed in compliance with specifications of the US Department of Transportation and charged with gas or liquid, marked, maintained, and periodically re-qualified for use.
5. Boilers and pressure vessels located on mine property under the inspection jurisdiction of the Illinois Department of Mines and Minerals.
6. Boilers and pressure vessels located on farms and used solely for agricultural purposes.
7. Steam boilers of miniature model locomotives, boats, tractors, or stationary engines:
 - a. Constructed and maintained as a hobby and not for commercial use;
 - b. Having an inside diameter not exceeding 12 inches and a grate area not exceeding 1-1/2 square feet;
 - c. Constantly attended;
 - d. Equipped with water level indicators, pressure gages, and safety valves.
8. Pressure vessels regulated and inspected under the *Illinois Fertilizer Act* of 1961.
9. Pressure vessels containing liquefied petroleum gas regulated under the *Liquefied Petroleum Gas Regulation*, except those used for industrial processes.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Steam boilers used for heating purposes and operated at a pressure not in excess of 15 psig and having a rating not in excess of 200,000 BTU per hour.
2. Hot-water heating boilers operated at a pressure not in excess of 30 psig and having a rating not in excess of 200,000 BTU per hour.
3. Boilers and pressure vessels, located in private residences or in multifamily buildings having fewer than six dwelling units, that are within any of the following categories:
 - a. Steam-heating boilers operated at no more than 15 psig;
 - b. Hot-water heating boilers operating at not more than 30 psig;
 - c. Hot-water boilers operated at not more than 160 psig or 250°F;
 - d. Pressure vessels containing only water under pressure for domestic supply purposes, including those containing air, the compression of which serves only as a cushion or airlift pumping function.
4. Steam boilers of railroad locomotives and traction engines built prior to 1955 that were constructed or operated in compliance with the federal *Locomotive Inspection Law* and are in a permanent collection of a museum or historical association.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. Inspected annually both internally & externally while not under pressure;
 - b. Inspected annually externally while under pressure.

Any power boiler or steam generator, the operation of which is an integral part of, or a necessary adjunct to, other continuous processing operations, shall be inspected internally at such intervals as are permitted by the shutting down of said processing operations. The board may provide for extension of time within which power boilers are required to be inspected based upon type, function or manner of operation.

2. Low-pressure steam, hot-water heating and hot-water supply boilers: Inspected biennially as required by the rules and regulations of the Board.
3. Pressure vessels:

- a. One triennial certificate inspection, which shall be an external inspection;
- b. An internal inspection at the discretion of the inspector, where construction permits.

All first-time inspections are performed by the division.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the division are accepted in lieu of inspections made by a division inspector with respect to boilers and pressure vessels insured by their respective companies; however, a division inspector must do the first/initial inspection.
2. Inspections made by inspectors employed by owners/users and commissioned by the division are accepted in lieu of inspections made by a division inspector with respect to boilers and pressure vessels self-insured by the owner/user thereof.
3. Reports of certificate inspections on insured boilers and pressure vessels must be filed with the division on forms provided by the division within 10 business days after the inspection.
4. Non-certificate reports of external inspections are not required to be filed unless there are code violations or dangerous conditions.
5. The chief inspector must be notified within 30 days of *suspension of insurance because of dangerous conditions or new business or discontinuance of insurance.*

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for power boilers, 24 months for low-pressure heating boilers, and 36 months for pressure vessels, is issued by the division for insured boilers and pressure vessels upon payment to the division of a \$70.00 fee for each boiler or pressure vessel. A grace period of two months is allowed.

STATE FEES

As authorized by the *Boiler and Pressure Vessel Safety Act*, the board hereby establishes the following fees to be collected for services rendered:

1. Examinations - **\$30.00**
2. Commissions:
 - a. New issuance - **\$40.00**
 - b. Renewal - **\$25.00**
3. All certificates of inspection - **\$70.00**

Inspections conducted by the division:

1. High-pressure and high-temperature water boilers:
 - a. Boilers without manhole - **\$30.00**
 - b. Boilers with manhole - **\$60.00**
2. Low-pressure steam and water boilers:
 - a. Boilers without manhole - **\$30.00**
 - b. Boilers with manhole - **\$60.00**
 - c. Hot-water supply boilers - **\$30.00**

No more than \$130.00 shall be charged for any one boiler in any one year.

3. Pressure vessels:

Fees are based on the product of the overall length times the width or diameter of the vessel expressed in square feet:

- a. 50 square feet or less - **\$25.00**
- b. 51 square feet to 150 square feet - **\$50.00**
- c. Over 150 square feet - **\$75.00**

No more than \$160.00 shall be charged for any one pressure vessel in any one year.

4. Annual statements per vessel (owner/user) - **\$35.00**
5. Additional services:

- a. Witness a hydrostatic test - **\$100.00**
- b. Joint reviews, audits, shop inspections:
 - i. One-half day (plus expenses, including travel and lodging) - **\$300.00**
 - ii. Full day (plus expenses, including travel and lodging) - **\$500.00**
- c. State Special fee - **\$1000.00**

MISCELLANEOUS

1. Only organizations holding valid ASME "V" or "UV" authorization, the National Board "VR" authorization or those specifically approved by the division may repair safety relief valves.
2. *Reciprocal Commission* is issued for a \$10.00 fee to inspectors holding an approved state or *National Board Commission* upon application to the division together with a photostatic copy of said commission. Examinations for *Certificate of Competency* are usually held by the *Board of Boiler and Pressure Vessel Rules and Regulations* the first Wednesday in March, June, September and December. An examination fee of \$30.00 is required. Commissions are issued upon payment of an additional fee of \$40.00 and renewed annually for a fee of \$25.00.
3. Illinois requires all companies performing welded repairs to boilers and pressure vessels under their jurisdiction to be licensed by the division. An application package may be requested by contacting the division. A license is issued for three years. Initial license fee is \$300.00. Renewal fee is \$150.00. Applicants must possess a National Board "R" stamp to qualify.
4. A copy of the *Illinois Boiler and Pressure Vessel Safety Act* and rules and regulations may be obtained by contacting the division or by visiting www.sfm.illinois.gov.

INDIANA



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STATE DEPARTMENT

Larry Parkey, Boiler & Pressure Vessel Section Chief
Department of Homeland Security
Division of Fire and Building Safety
Boiler and Pressure Vessel Safety
402 West Washington Street, Suite E241
Indianapolis, IN 46204

Telephone — 317.232.1921
Fax — 317.234.8436
Email — lparkey@dhs.in.gov

EMPOWERMENT

Indiana Boiler and Pressure Vessel Board empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1953

Date of latest amendment to law: March 1996.
Date rules and regulations implemented: 1953.
Date of latest rules and regulations: March 2009.
State statute: Indiana Administrative Code, Title 680. *Boiler and Pressure Vessel Rules Board.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2015 Edition), Sections I, II, III, IV, V, VIII, IX, X, and XI via Emergency Rule LSA# 15-291(E).
2. Owners/users must file a copy of the *Manufacturer's Data Report* with the National Board.
3. *National Board Inspection Code* (2015 Edition) - via Emergency Rule LSA# 15-291(E)
4. National Board registration required for boilers and pressure vessels.
5. API-510 (Current Edition) for petrochemical repairs, not alterations. Allowed for use by Accredited (Petrochemical) Owner-User Inspection agencies only.
6. Special design or construction requires approval by the Boiler and Pressure Vessel Rules Board.
7. Electrically-heated boilers shall meet the applicable requirements of Underwriters Laboratories, Inc.
8. ASME PVHO-1 (Current Edition).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, PP, S, U, U2, U3, UM, UV, V.
3. Indiana registration number is assigned at initial inspection by state-employed inspector.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels except the following:

1. Hot-water heaters of a type commonly known as "domestic water heaters" having a size and heat input not

exceeding that specified by the board.

2. Pressure vessels other than nuclear vessels operated entirely full of water or other liquid which the board (by a specific ruling) holds to be not materially more hazardous than water, provided temperature of vessel's contents does not exceed 180°F.
3. Boilers and unfired pressure vessels under federal regulation.
4. Unfired pressure vessels meeting requirements of the US Department of Transportation and Public Facilities for shipment of liquids and gases under pressure.
5. Air tanks located on vehicles operating under rules of other state authorities and used for carrying passengers or freight.
6. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
7. Pressure vessels installed before July 1, 1971, when:
 - a. Volume is 15 cubic feet or less when not located in a place of public assembly;
 - b. Volume is 5 cubic feet or less when located in a place of public assembly;
8. Pressure vessels installed after July 1, 1971, when:
 - a. Volume is 15 cubic feet or less and adequately protected by pressure-relieving devices set to function at 300 psi or less when not located in a place of public assembly;
 - b. Volume is 5 cubic feet or less and adequately protected by pressure-relieving devices set to function at 250 psi or less when located in a place of public assembly;
 - c. Volume of 1-1/2 cubic feet or less regardless of pressure or location, unless otherwise covered by the act.
9. Unfired pressure vessels (other than nuclear vessels) protected by adequate pressure-relieving devices set to function at not over 15 psig.
10. Pressure vessels containing liquefied petroleum gases and regulated by the Fire Prevention & Building Safety Commission.
11. Surgical sterilizers, coffee urns and steam-jacketed food cookers not exceeding size limits specified by the board.
12. Commercial toy boilers and miniature model boilers constructed as a hobby, of a size not exceeding that specified by the board.
13. Pressure vessels containing anhydrous ammonia (used in transportation or distribution storage of the product as a liquid fertilizer) for which construction, installation, and safety requirements generally are separately prescribed in other regulations existing or hereafter promulgated by the State of Indiana or an administrative agency thereof (does not include vessels in refineries or manufacturing or process plants).
14. Nuclear vessels for the collection and disposal of nuclear waste from a nuclear energy system which are not subject to pressures greater than would prevail if they were vented to the atmosphere.
15. Standard and miniature traction engine boilers and other boilers used solely for exhibition purposes.
16. A locomotive boiler used only on a tourist attraction railway.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

The following items are exempt from field inspection and permitting:

1. Any regulated boiler or pressure vessel located on a farm and used solely for agricultural purposes.
2. Any steam boiler or water-heating boiler meeting all of the following requirements:
 - a. Located in an owner-occupied residence, a residential structure with fewer than seven apartments, or a place other than a place of public assembly;
 - b. Operated for heating purposes at a pressure not exceeding 15 psig, if qualifying as a steam boiler, and operated at a pressure not exceeding 30 psig, if qualifying as a water-heating boiler;
 - c. Having a gross output rating not exceeding 215,000 BTU per hour, if not located in a place of public assembly.
3. Any pressure vessel meeting all of the following requirements:
 - a. Containing only water under pressure for domestic supply purposes, including one containing air, if the compressed air serves only as a cushion or as part of an airlift pumping system;
 - b. Located in an owner-occupied residence or a residential structure with fewer than seven apartments.
4. Any pressure vessel used as an integral part of an electrical circuit breaker.

INSPECTIONS REQUIRED

Boilers, other than steam-generating equipment which is an integral part of a continuous processing unit:

1. Power boilers and miniature boilers:
 - a. One annual internal and external certificate inspection;
 - b. One annual external inspection while under pressure, if possible.

With specific approval of the Boiler and Pressure Vessel Rules Board and the inspection agency, power boilers exceeding 300,000 pounds per hour steaming capacity may have inspection periods extended to a maximum of two years.
2. Low-pressure heating boilers, hot-water heating and hot-water supply boilers: One biennial certificate inspection externally and, where construction permits, internally.
3. Pressure vessels and steam-generating equipment which is an integral part of a continuous processing unit: Certificate inspection intervals shall not exceed the maximum periods between inspections determined in accordance with the provisions of Indiana rules, the *National Board Inspection Code*, or API-510 as applicable, except that:
 - a. The interval between certificate inspections shall not exceed five years;
 - b. Where systematic corrosion data are not available, the maximum period between certificate inspections shall be three years or such shorter period as the inspection agency having jurisdiction deems proper.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by department are required in lieu of inspections made by department inspector when the vessel is insured.
2. Reports of certificate inspections must be filed with department on National Board forms within 30 days.
3. Reports of external inspections, except certificate inspections, are not required unless there are dangerous conditions. The department must be notified immediately of *suspension of insurance on account of dangerous conditions*.
4. The department must be notified within 30 days of *new business* and *discontinuance of insurance*.
5. Inspectors employed by the State of Indiana Boiler & Pressure Vessel Safety Section make all first (installation approval) inspections.

OWNER/USER INSPECTION AGENCY REQUIREMENTS

1. Inspections made by inspectors employed by owner/user inspection agencies and commissioned by the department are accepted in lieu of inspections made by department inspector.
2. Reports of inspections made by inspectors employed by owner/user inspection agencies may be filed with the department on either National Board forms or special forms approved by the Boiler and Pressure Vessel Rules Board.
3. Each owner/user inspection agency shall remit a filing fee of \$20.00 for each boiler or pressure vessel with the report.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for not more than two months beyond the date when next certificate inspection is due, is issued by the department. Payment of \$25.00 *Certificate of Inspection* fee by the owner/user shall be made directly to the department and is required for each boiler or pressure vessel inspected by an insurance company inspection agency. *Certificate of Inspection* fee is \$25.00 when inspection is made by state-employed inspector, as well as inspection-specific fees.
2. Owner/user inspection agencies shall keep on file a true record or copy of the latest inspection report, signed by either the inspector who made the inspection or by a qualified engineer under whose supervision the inspection was made.
3. No inspection certificate issued for an insured boiler or pressure vessel is valid after the boiler or pressure vessel, for which it was issued, ceases to be insured by a duly authorized insurance company.

STATE FEES

1. The office of the state building commissioner may not charge an owner or user more than two of the fees described in subsections (2) through (5) for inspections of regulated boilers and pressure vessels during a particular calendar year. However, an owner or user who has failed to:
 - a. Prepare a boiler or pressure vessel for the required inspection on the date specified by the inspector

shall pay to the office a fee of **\$25.00**; and

- b. Make repairs, or otherwise correct conditions of noncompliance applicable to regulated equipment within the time frame specified by the inspector shall pay to the office a fee of **\$25.00**. Verification of the conditions noted in either subdivision (a) or (b) shall be documented on the inspection report form mandated by the division of boiler and pressure vessel safety to report inspection activities relating to equipment regulated by the division.

2. Regulated boilers – internal inspection:

- a. Boilers with 100 square feet of heating surface or less - **\$24.00**
- b. Boilers over 100 square feet but less than or equal to 500 square feet of heating surface - **\$36.00**
- c. Boilers over 500 square feet but less than or equal to 1,000 square feet of heating surface - **\$48.00**
- d. Boilers over 1,000 square feet but less than or equal to 10,000 square feet of heating surface - **\$90.00**

Fees for internal inspection of regulated boilers exceeding 10,000 square feet of heating surface shall be charged at the rates specified in subsection (9).

3. Regulated boilers – external inspection:

- a. Boilers with 50 square feet or less of heating surface - **\$18.00**
- b. Boilers over 50 square feet but less than or equal to 150 square feet of heating surface - **\$24.00**
- c. Boilers over 151 square feet of heating surface - **\$40.00**

4. Regulated pressure vessels – internal or external inspections:

- a. Vessels having an area of 50 square feet or less - **\$15.00**
- b. Vessels having an area over 50 square feet but less than or equal to 150 square feet - **\$30.00**
- c. Vessels over 150 square feet of area - **\$60.00**

Fees for internal or external inspection of regulated pressure vessels shall be based on the sectional area of the vessel (overall length head to head times the width or outside diameter) expressed in square feet.

5. Service water heater – internal or external inspection - **\$10.00**

6. Permit processing fee for all certificates of inspection (operating permits) issued by the office - **\$25.00**

In all cases this fee is in addition to fees for inspection activities.

7. Request to recreate a permit that has been lost - **\$15.00**

8. Petition for variance - **\$200.00**

*An additional fee of **\$500.00** shall accompany the petition when engineering calculations are included for review.*

9. Inspection and/or audit activities requested that are not otherwise listed shall be either of the following:

- a. **\$300.00** per day, not to exceed four regular working hours.
- b. **\$600.00** per day exceeding four regular working hours, plus **\$75.00** per hour exceeding eight regular working hours in a particular day, plus actual expenses incurred such as travel, lodging, and dining expenses.

A fee computed under this subsection must cover the period from the time the inspector leaves the regular work schedule to the time the inspector returns to the regular work schedule, and is payable upon receipt of an invoice.

10. Payment of **\$20.00** per object inspected shall accompany the annual report of inspection of owner or user inspection agencies.

11. Application for an owner or user inspection agency certificate - **\$500.00**

12. Application to sit for an inspector examination - **\$100.00**

13. Annual renewal of an inspector license - **\$25.00**

All payments to the office are payable to the Fire and Building Services Fund. The state building commissioner may authorize the refunding of any fee specified in this section that was paid or collected in error. (675 IAC 12-3-13) (Effective April 1, 2003)

MISCELLANEOUS

1. Examinations for an inspector's commission are held by the board on the first Wednesday of the months of March, June, September, and December. A \$100.00 fee is applicable.
2. *Reciprocal Commission* is issued to inspectors holding a *National Board Commission* or a *Certificate of*

Competency issued by a state with a standard of examination equal to that of the State of Indiana upon application to the department together with photostatic copy of said commission or *Certificate of Competency*. Fee of \$25.00 is charged each applicant for a commission.

3. Inspector's identification card must be renewed annually by December 31. There is a \$25.00 charge for renewal.
4. An operator's license is not required to operate a boiler or pressure vessel.
5. Copy of boiler and pressure vessel rules with selected excerpts from Indiana statute is available by contacting:

Indiana BPV Safety Division
317.232.1921

An update to adopted standards is intended soon. Please refer to the Indiana Boiler and Pressure Vessel Safety web site periodically to verify the applicable editions.

IOWA



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CONTACT INFORMATION

Division of Labor Services
1000 East Grand Avenue
Des Moines, IA 50319-0209

<http://www.iowadivisionoflabor.gov/boiler-and-pressure-vessel-safety>

Telephone — 515.725.5609
Email — boilers@iwd.iowa.gov
Fax — 515.281.7995

EMPOWERMENT

Pursuant to Iowa Code [Section 89.14](#), the Boiler and Pressure Vessel Board is authorized to adopt rules.

IMPORTANT DATES

Beginning of boiler program: 1887
Date of latest amendment to law: July 2014.
Date of latest rules and regulations: 2016.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Codes (2015), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X. Only code cases that have been adopted by the board are recognized.
2. ASME CSD-1 (2012 Edition).
3. ASME B31.1 (2014 Edition).
4. ASME B31.9 (2014 Edition).
5. National Board Inspection Code (2015 Edition). Parts 1, 2 & 3
6. [National Board registration is required for most boilers and unfired steam pressure vessels.](#)
7. All covered objects shall be identified by an Iowa identification number.
8. Written notice of intent to install covered objects must be submitted to the Commissioner of Labor at least 10 days in advance.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, PP, S, U, U2, U3, UM, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Iowa Code [Chapter 89](#) covers boilers, unfired steam pressure vessels, and appurtenances unless exempted by Iowa Code [Section 89.4](#). All objects covered by Chapter 89 are subject to rules for construction and stamping except for certain water heaters. Some water heaters that are too small for an ASME stamp are covered by Chapter 89, but need not have an ASME stamp.

RULES FOR FIELD INSPECTION

All objects covered by Iowa Code [Chapter 89](#) are subject to field inspection according to the schedule in Iowa Code [section 89.3](#).

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the Division of Labor Services are accepted in lieu of inspections made by a state inspector.
2. Insurance company inspectors must apply for a new commission each June.
3. The Division of Labor Services should be notified on National Board forms of insurance changes.
4. Reports of required inspections must be filed within 30 days on forms approved by the Labor Commissioner.

CERTIFICATE OF INSPECTION

A Certificate of Inspection will be issued by the commissioner upon successful completion of an inspection and payment of the appropriate fees.

STATE FEES

Fees are set forth in [administrative rule 90.7](#).

MISCELLANEOUS

1. Welded repairs or alterations to boilers or pressure vessels shall be made in accordance with the *National Board Inspection Code* by a valid National Board "R" Stamp holder. If the National Board Inspection Code requires that an R-1 Report of Repair or an R-2 Report of Alteration be filed with the National Board, a copy of the National Board form must be simultaneously filed with the labor commissioner.
2. An operator's license is not required to operate a boiler or pressure vessel, except in some municipalities where licensing is mandated by local ordinance.

KANSAS



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STATE DEPARTMENT

Robert Stimson, Acting Chief Boiler Inspector
Office of the State Fire Marshal
800 S.W. Jackson St., Suite 104
Topeka, Kansas 66612

Telephone — 785.296.3401
Email — boiler.inspection@ksfm.ks.gov
Fax — 785.296.0151

EMPOWERMENT

Legislative committees empowered to make, alter or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1953 — repealed: 1975; reinstated: 1977

Date of latest amendment to law: October 1998.
Date rules and regulations implemented: 1953 and 1977.
Date of latest amendment to rules and regulations: November 2006.
State statute: Kansas Statutes Annotated, Chapter 44. Labor and Industries, Kansas Boiler Safety Act, K.S.A 44-913 et. seq.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X
2. ASME CSD-1 (1998 Edition).
3. ASME B31.1 (2007 Edition).
4. *National Board Inspection Code* (2007 Edition).
5. National Board registration required for pressure vessels installed after January 1, 1999, and for boilers.
6. NFPA 70 (2002 Edition), 85 (2007 Edition), 85A (1987 Edition).
7. Uniform Mechanical Code (2000 Edition).
8. International Plumbing Code (1997 Edition).
9. UL 1776 (2002 Third Edition).
10. Special design or construction requires approval of the secretary.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, S, U, UM, V.
3. All boilers and pressure vessels installed after January 1, 1999, shall have securely attached to the front of the boiler a metal tag not less than one inch in height which shall have the serial number of the state of Kansas stamped thereon.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers/pressure vessels, except the following:

1. Boilers and pressure vessels under the control of the US government.
2. Fire engine boilers brought into the state for temporary use in times of emergency.
3. Boilers and pressure vessels located on producing oil and gas leases or storage areas outside the limits of any municipality, used solely for oil and gas production purposes.
4. Hot-water supply boilers which are directly fired with oil, gas, electricity, or solar energy and equipped with safety relief valves approved by the National Board and ASME, if none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water capacity of 85 gallons or 120 gallons for an electric utility generating plant.
5. Pressure vessels constructed and installed prior to January 1, 1999.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers and pressure vessels located on farms and used solely for agricultural or horticultural purposes.
2. Heating boilers and pressure vessels which are located in private residences or in apartment houses of fewer than five family units.
3. Boilers and pressure vessels operated and regularly inspected by railway companies operating in interstate commerce.
4. Any boiler or pressure vessel in any establishment in which petroleum products are refined or processed and where all boiler and pressure equipment is inspected and rated either by an inspection service regularly maintained within such establishment or provided by the manufacturer, designer, or insurer of such equipment (in accordance with the applicable provisions of any published code, codes, rules, or recommended practices nationally recognized in the industry as providing suitable standards for the inspection, repair, and rating of pressure equipment of the type used in such establishments).
5. Pressure vessels used for transportation and storage of compressed gases when constructed in compliance with specifications of the US Department of Transportation and when charged with gas marked, maintained, and periodically re-qualified for use.
6. Pressure vessels located on vehicles operating under the rules and regulations of other state authorities and used to transport passengers or freight.
7. Pressure vessels installed on the right-of-way of railroads and used in the operation of trains.
8. Pressure vessels having an internal or external operating pressure not exceeding 15 psig with no limit on size.
9. Pressure vessels having an inside diameter, width, height, or cross-section diagonal not exceeding 6 inches, with no limitation on length or pressure of the vessel.
10. Pressure vessels for containing water or other nonflammable liquids under pressure, including those containing air, the compression of which serves only as a cushion, when neither of the following is exceeded:
 - a. A design pressure of 300 psig;
 - b. A design temperature of 210°F.
11. Pressure vessels which may be classified as pressure containers which are an integral part of components of rotating or reciprocating mechanical devices.
12. Pressure vessels that do not exceed:
 - a. 15 cubic feet and 250 psi;
 - b. 1-1/2 cubic feet and 600 psi.
13. Pressure vessels installed before January 1, 1999.
14. Any anhydrous ammonia storage or containment vessels.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. Annual certificate inspection (internal inspection);
 - b. Annual external inspection while under pressure, if possible, at approximately a six-month interval from the certificate inspection.
2. Steam heating boilers:

- a. Annual certificate inspection;
 - b. A triennial internal inspection where construction permits.
3. Hot-water supply boilers: a triennial external certificate inspection (under 400,000 BTU per hour).
 4. Low-pressure hot-water supply boilers with heat input over 400,000 BTU: an annual external certificate inspection.
 5. All other boilers: annual certificate inspection with an internal inspection at the discretion of the inspector. An electrical generating utility may apply for, and receive, a variance granting such utility up to an additional year between inspections.
 6. Pressure vessels: one-time inspection of new installations and the replacement of vessels 15 cubic feet and over constructed and installed after January 1, 1999.
 7. Antique scale model or other steam boilers which are used exclusively for exhibition purposes and which are inspected by associations that have an approved inspection procedure and qualified inspectors.

A grace period of two months beyond the periods specified above may elapse between certificate inspections. The secretary may provide, by rules and regulations, for longer periods between certificate inspections.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and certified by the chief inspector are accepted in lieu of inspections made by a state inspector.
2. Reports of certificate inspections must be filed with the chief inspector on National Board forms within 30 days after inspection.
3. All insurance companies shall notify the chief inspector on National Board forms within 30 days of all boiler risk: *written, canceled, or not renewed*. Chief inspector shall be immediately notified of insurance suspension because of unsafe conditions.
4. All insurance companies shall immediately notify the chief inspector of any unsafe boiler which they refuse to insure and shall submit a report of defects.

CERTIFICATE OF INSPECTION

1. If the boiler upon inspection is found to conform to the rules and regulations, the chief inspector shall issue the owner or user an *Inspection Certificate*. The certificate fee, paid directly to the chief inspector by the owner or user, shall be \$30.00.
2. Such *Inspection Certificate* shall be valid for 14 months from the date of issue, except when the inspection interval is extended by the chief inspector.

STATE FEES

1. Certificate inspections for power boilers and high-pressure, high-temperature water boilers:
 - a. Miniboilers - **\$50.00**
 - b. Boilers of 50 square feet of heating surface or less - **\$115.00**
 - c. Boilers over 50 square feet and less than 500 square feet heating surface - **\$140.00**
 - d. Boilers over 500 square feet and less than 4,000 square feet heating surface - **\$150.00**
 - e. Boilers of 4,000 square feet or more and less than 8,000 square feet heating surface - **\$175.00**
 - f. Boilers of 8,000 square feet or more and less than 10,000 square feet heating surface - **\$200.00**
 - g. Boilers of 10,000 square feet heating surface or more - **\$400.00**
2. Heating Boilers (internal inspections)
 - a. Heating boilers without manhole - **\$85.00**
 - b. Heating boilers with manhole - **\$100.00**
3. Heating Boilers (external inspections):
 - a. Heating boilers without manhole - **\$60.00**
 - b. Heating boilers with manhole - **\$75.00**
 - c. Hot-water supply boilers - **\$50.00**
4. Power boilers (external inspections):
 - a. Boilers of 50 square feet heating surface or less - **\$55.00**

- b. Boilers of 50 square feet heating surface but less than 500 square feet - **\$65.00**
 - c. Boilers of 500 square feet heating surface but less than 1,000 square feet - **\$90.00**
 - d. Boilers of 1,000 square feet heating surface but less than 4,000 square feet - **\$175.00**
 - e. Boilers of 4,000 square feet heating surface but less than 8,000 square feet - **\$225.00**
 - f. Boilers of 8,000 square feet heating surface but less than 10,000 square feet - **\$300.00**
 - g. Boilers of 10,000 square feet heating surface or more - **\$400.00**
5. Pressure Vessels (external inspections):
- a. Pressure Vessels with a capacity of 500 gallons or less - **\$55.00**
 - b. Pressure Vessels with a capacity of 500 gallons but less than 2,000 gallons - **\$65.00**
 - c. Pressure Vessels with a capacity of 2,000 gallons but less than 5,000 gallons - **\$75.00**
 - d. Pressure Vessels with a capacity of 5,000 gallons but less than 10,000 gallons - **\$90.00**
 - e. Pressure Vessels with a capacity of 10,000 gallons but less than 20,000 gallons - **\$125.00**
 - f. Pressure Vessels with a capacity of 20,000 gallons but less than 30,000 gallons - **\$175.00**
 - g. Pressure Vessels with a capacity of 30,000 gallons but less than 50,000 gallons - **\$225.00**
 - h. Pressure Vessels with a capacity of 50,000 gallons or more - **\$275.00**
6. Pressure Vessels (internal inspections):
- a. Pressure Vessels with a capacity of 500 gallons or less - **\$75.00**
 - b. Pressure Vessels with a capacity of 500 gallons but less than 2,000 gallons - **\$90.00**
 - c. Pressure Vessels with a capacity of 2,000 gallons but less than 5,000 gallons - **\$125.00**
 - d. Pressure Vessels with a capacity of 5,000 gallons but less than 10,000 gallons - **\$175.00**
 - e. Pressure Vessels with a capacity of 10,000 gallons but less than 20,000 gallons - **\$250.00**
 - f. Pressure Vessels with a capacity of 20,000 gallons but less than 30,000 gallons - **\$325.00**
 - g. Pressure Vessels with a capacity of 30,000 gallons but less than 50,000 gallons - **\$350.00**
 - h. Pressure Vessels with a capacity of 50,000 gallons or more - **\$400.00**
7. Hydrostatic tests: When it is necessary to make a special trip to witness the application of a hydrostatic test, an additional fee based on the scale of fees applicable to a certificate inspection of the boiler shall be charged.
8. Inspections, including shop inspections, shop reviews, special inspections, and inspections of secondhand or used boilers, when made by the chief or deputy inspector, shall be charged a fee of **\$500.00** per day.
9. National Board "R" Stamp Reviews: When a state inspector participates in a stamp review conducted by The National Board of Boiler and Pressure Vessel Inspectors, or inspects welded repairs to a boiler, the fee charged shall be **\$500.00** per day.
10. *Certificate of Inspection* - **\$30.00**
11. Certificate replacement - **\$10.00**

MISCELLANEOUS

1. Emergency cutoff switch is required on each hot water supply boiler equipped with power burners, as well as boilers with a BTUH input of 400,000 or more (regardless of burner type). Each heating and power boiler must have an emergency shutdown switch at each exit to meet NFPA 70 requirements. Input of 12,500,000 BTUH or more must meet requirements of NFPA 85, 85A, 85F.
2. Hot water supply boiler cannot be used for comfort heat.
3. Each pool heater must have a safety relief valve and pressure switch or flow switch. Heaters generating 400,000 BTUH or more must meet requirements of ASME Section IV and be registered with the National Board.
4. Each person who installs, repairs, or tests boilers with a capacity of 1,250,000 BTUH or more must be authorized by the chief inspector before proceeding.
5. *Certificate of Competency* identification card is issued to inspectors holding a *National Board Commission* for a fee of \$25.00, upon application to the chief inspector together with a photostatic copy of said commission.
6. The *Certificate of Competency* identification card must be renewed annually by December 31. The fee for renewal is \$20.00.
7. A copy of the *Kansas Boiler Safety Act* (KSA 44-913) may be obtained by writing to or calling the Boiler Safety Unit at 785.296.3401 or go to <http://firemarshal.ks.gov/division/prevention/facility-inspection-information/boilers>.

KENTUCKY



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STATE DEPARTMENT

Mark Jordan, Chief Boiler Inspector
Department of Housing, Buildings, and Construction
Boiler & P.V. Inspection
Division of Plumbing
101 Sea Hero Road, Suite 100
Frankfort, KY 40601-5405

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Email — Mark.Jordan@ky.gov
Fax — 502.573.1058

EMPOWERMENT

Commissioner Department of Housing, Buildings and Construction empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1962

Date of latest amendment to law: June 2003.
Date rules and regulations implemented: 1962.
Date of latest rules and regulations: June 2003.
State statute: Kentucky Revised Statutes, Title XIX Public Safety and Morals, Chapter 236.00 *Boiler and Pressure Vessel Safety Act*, Sections .005 through .990.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code, Sections I, II, III (Divisions 1, 2), IV, V, VIII (Divisions 1, 2), IX, and code cases.
2. Code addenda and case interpretations accepted automatically.
3. ASME B31.1 for pressure piping connected to the boiler or pressure vessel. For low-pressure boilers, the metallic piping material allowed by B31.9 shall be acceptable. State inspection is required.
4. *Manufacturer's Data Report* required on all boilers of steel construction and pressure vessels operated in Kentucky (unless exempt by the act, data reports shall be filed with the National Board with copies sent to the department).
5. *National Board Inspection Code*.
6. National Board registration required for boilers and pressure vessels.
7. Special design or construction requires approval of Board of Boiler Rules and chief inspector.
8. Foreign codes: Accepted when meeting the requirements for *State Specials*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, PP, S, U, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal control.
2. Boilers and pressure vessels located on farms and used solely for agricultural purposes.
3. Boilers and pressure vessels located at oil refineries.
4. Steam or vapor boilers with pressure not exceeding 15 psi used for heating purposes in private residences.
5. Hot-water heating boilers with a pressure not exceeding 30 psi and hot-water supply boilers in private residences.
6. Any unfired pressure vessels used as containers for liquefied petroleum gases and subject to the jurisdiction of the Office of Housing, Buildings and Construction under *Kentucky Revised Statutes*, Chapter 234.
7. Pressure vessels used for transportation of compressed gases constructed and operated in compliance with specifications and regulations of another state or federal authority.
8. Pressure vessels containing air located on vehicles operating under the regulations of another state or federal authority.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers:
 - a. Annual internal and external inspection while not under pressure;
 - b. Annual external inspection while under pressure, if possible.
2. Low-pressure steam or vapor-heating boilers, hot-water heating boilers, and hot-water supply boilers: biennial internal and external inspection where construction permits.

A grace period of two months beyond the periods specified above may elapse between inspections. The department may, at its discretion, permit longer periods between inspections. All new boiler, pressure vessel, and piping installation inspections must be made by a department inspector.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of internal inspections must be filed with the department on National Board forms within 30 days after inspection.
3. All insurance companies shall notify the department within 30 days of all boiler risks *written, canceled, not renewed, or suspended because of unsafe conditions.*
4. All insurance companies shall notify the department and submit a report of defects on any boiler refused insurance.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the department upon payment of \$15.00 by the owner/user, valid for not more than 14 months from the date of issue in the case of power boilers; 26 months in the case of low-pressure steam or vapor-heating boilers, hot-water heating boilers, or hot-water supply boilers; and 38 months for unfired pressure vessels.

STATE FEES

1. Power boilers internal inspection:
 - a. Boilers not more than 100 square feet heating surface - **\$35.00**
 - b. Boilers more than 100 square feet but not over 1,000 square feet heating surface - **\$50.00**
 - c. Boilers more than 1,000 square feet but not over 4,000 square feet heating surface - **\$90.00**
 - d. Boilers more than 4,000 square feet but not over 10,000 square feet heating surface - **\$120.00**
 - e. Boilers more than 10,000 square feet heating surface - **\$200.00**
2. Power boilers external inspection:

- a. Boilers not more than 100 square feet heating surface - **\$30.00**
- b. Boilers more than 100 square feet heating surface - **\$35.00**
- c. Miniature boilers - **\$25.00**

Not more than the equivalent sum of the internal and external inspection fees shall be charged or collected for all inspections of a boiler in any one year.

3. Low-pressure boilers:

- a. Heating boilers without manhole - **\$35.00**
- b. Heating boilers with manhole - **\$55.00**
- c. Hot-water supply boilers - **\$25.00**

Not more than one fee shall be charged or collected for inspections of a boiler in any two-year period.

4. Pressure vessels: re-inspection - **\$25.00**

5. Hydrostatic tests: when it is necessary to make a special trip to witness a hydrostatic test, an additional fee based on shop inspection fees shall be charged.

6. Pressure piping: Fees for new installation inspection of pressure piping on both power and heating boilers are set by the department. All other inspections, including shop inspections and inspections of secondhand or used boilers made by the boiler inspector shall be charged at the rate of **\$450.00** for one-half day and **\$600.00** for one day over four hours; **\$600.00** for eight hours or any part thereof on a Saturday, Sunday, or public holiday; and **\$40.00** per hour for overtime in excess of eight hours in any one day, plus all expenses, including travel, hotel, and incidentals.

MISCELLANEOUS

1. Examinations for commissions as boiler inspectors shall be given by the Boiler Inspection Section on the first Wednesday and Thursday in March, June, September, and December.
2. *Reciprocal Commission* is issued to inspectors holding an approved state or *National Board Commission* upon application to the department together with a photostatic copy of the commission.
3. All boilers shall be stamped with a Kentucky serial number preceded by the letters "KY."
4. All cast-iron boilers shall have securely attached to the front of the boiler a metal tag not less than one inch in height on which the serial number of the State of Kentucky shall be stamped.
5. A license from the Commissioner or the chief boiler inspector on recommendation of the board is required to install, erect, or repair boilers, pressure vessels, and piping. A permit to install or for major repairs is also required from the Department. Plans are required for installation of boilers and pressure vessels prior to installation.
6. A copy of the state's boiler and pressure vessel laws, rules, and regulations may be obtained by contacting the office of the chief boiler inspector or at the following Web sites:

Statutes: <http://www.lrc.ky.gov/KRS/236-00/chapter.htm>

Regulations: <http://www.lrc.ky.gov/kar/Title815.htm>

LOS ANGELES, CALIFORNIA



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MUNICIPAL DEPARTMENT

Cirilo Reyes, Senior Safety Engineer
Los Angeles Department of Building and Safety
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Los Angeles, CA 90012

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EMPOWERMENT

Department of Building and Safety empowered to make, alter, and amend Department Information Bulletins.
Boiler Board: No.

DATE OF LAW PASSAGE: 1894

Date of latest amendment to law: December 2007.
Date rules and regulations implemented: 1894.
Date of latest amendment to rules and regulations: December 2007.
City ordinance: Los Angeles Municipal Code, Chapter IX Building Regulations, Article 7. Boilers, *Unfired Pressure Vessels and Other Equipment*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, II, III, IV, V, VIII (Divisions 1, 2), IX, and code cases.
2. Code addenda accepted automatically (subject to concurrence with California Division of Industrial Safety).
3. ASME B31.1 (2001 Edition).
4. Uniform Mechanical Code.
5. Special design or construction requires approval by California Division of Industrial Safety and the Pressure Vessel Section of the City of Los Angeles.
6. Design, construction, stamping, repair, and alteration of fired and unfired pressure vessels shall comply with Title 8, Chapter 4 of the State of California *Division of Industrial Safety Orders*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: A, H, HLW, HV, M, PP, S, U, UM, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Except for those installed in private residences where other codes apply, hot-water boilers, steam boilers, and unfired pressure vessels shall be constructed, installed, and maintained in accordance with provisions of the *Los Angeles Municipal Code*, Chapter IX, the *ASME Boiler and Pressure Vessel Code*, and Chapter 4 of the *California Division of Industrial Safety Orders*.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Every steam boiler and hot-water boiler over 400,000 BTU per hour input, unfired pressure vessels including hot-water storage tanks over 120 gallons, steam mangles, steam kettles, vulcanizers, sprinkler tanks, clothes presses, rendering tanks, retorts, dryers, vacuum cookers, and steam receivers.

Exceptions:

1. Equipment owned and operated by entities of the United States government, County of Los Angeles and the State of California.
2. Unfired pressure vessels (other than those that receive steam) including air tanks having a volume of 1-1/2 cubic feet or less and possessing safety valves set to open at not more than 150 psi.
3. Portable boilers and portable unfired pressure vessels.
4. Oxygen and non-flammable bulk industrial gas tanks.
5. Pressure vessels used in refrigerating systems.
6. Cylinders used in US Department of Transportation service.
7. Equipment in private residences.
8. Equipment operated or engaged in interstate commerce.

INSPECTIONS REQUIRED

Unless internal inspection is required by Title 8, Chapter 4 of the State of California *Division of Industrial Safety Orders*, annual external inspection is required. Where construction and operating conditions permit, equipment may be subject to internal inspection. In the judgment of the superintendent, a hydrostatic or other test may be required. Department may accept ultrasonic thickness determination in lieu of, or in conjunction with, internal inspection of air tanks of 36-inch diameter or less. Department may also require internal inspection or other nondestructive examination. Air tanks are inspected triennially.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector. Initial installation inspection must be made by a department inspector.
 - a. Reports of inspection must be filed with department on city-approved forms within 21 days;
 - b. Department must be notified of *suspension of insurance on account of dangerous conditions*;
 - c. The department must be notified of *new business and discontinuance of insurance*.
2. Owner/User inspection requirements:
 - a. Inspections made by inspectors employed by owners/users and commissioned by the department are accepted in lieu of inspections made by a department inspector. Initial installation inspection must be made by a department inspector;
 - b. Reports of inspection must be filed with department on National Board forms within 21 days.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for one year, is issued by the insurance company making the inspection on forms furnished by the department. There is a \$19.00 processing fee for each object reported by insurance company. Department will bill each insurance company on a monthly basis.

MUNICIPAL FEES

1. A fee of \$143.00 per hour or part thereof, including travel time, shall be charged for all shop, field-erection, and resale inspections of all tanks, boilers, parts of tanks and boilers, and nuclear components – and for consultation, surveys, audits, manual reviews, and other activities required or related to the ASME Code (or other national standard for boilers and tank shops) when made by qualified engineers of the department.
2. A fee shall be charged for field permit inspection of air tanks, liquefied petroleum gas tanks, and boilers by qualified safety engineers employed by the department.
3. Persons owning or having the custody, management or operation of an air tank, liquefied petroleum gas tank or boiler who fail to pay required fees after 60 days of notification shall be assessed a penalty fee equal to 50% of the original fee.
4. Witnessing the performance of hydrostatic tests, as prescribed by the code, drilling shell plates, or performing ultrasonic tests to determine minimum thickness, and extensive repairs are charged at a rate of \$143.00 per hour.

MISCELLANEOUS

1. Commissions are issued for an initial fee of \$125.00 to inspectors holding a valid California *Certificate of Competency*; annual renewal fee is \$50.00, plus a 2% surcharge and a 6% computer surcharge.
2. Investigation fee for insurance reports 30 days overdue or more is \$15.00 per object.
3. A permit for installation of a boiler or pressure vessel must be obtained from the department. Permit fee is \$20.00 per object, plus a 2% surcharge, plus a 6% computer surcharge.
4. Operators of steam boilers over 15 psi and over 5 hp are required to be licensed.
5. Repairs by fusion welding must be made in accordance with *California Safety Orders*.

LOUISIANA



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STATE DEPARTMENT

Joseph "Donnie" LeSage, District Chief
Louisiana State Fire Marshal Office
Mechanical Safety Section
8181 Independence Boulevard
Baton Rouge, LA 70806

Telephone — 225.925.4572
800.256.5452

Email — Donnie.LeSage@la.gov

Fax — 225.925.4520

EMPOWERMENT

Assistant Secretary, Office of State Fire Marshal, empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1938

Date of latest amendment to law: August 2000.

Date rules and regulations implemented: 1938 (revised in 1950).

Date of latest amendment to rules and regulations: July 2007

State statute: Louisiana Revised Statutes, Title 23, Chapter 5, Part III, *Regulations Affecting Boilers*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition, 2005 Addendum), Sections I, IV, VI, VII, IX, and code cases.
2. Code addenda and case interpretations accepted automatically.
3. Code rules updated when published by ASME.
4. Pressure vessels to Section VIII when required by the owner/user only.
5. ASME CSD-1 (2004 Edition)
6. NFPA-54, *National Fuel Gas Code*
7. *National Board Inspection Code* (2004 Edition, 2005 Addendum).
8. National Board registration required for boilers.
9. Special design or construction *Louisiana Special* requires approval of the state fire marshal and must be inspected during construction by an inspector with a *National Board Commission* and *Louisiana Boiler Inspectors Commission*.
10. Potable water heaters must be designed and constructed to Underwriters' Laboratories or other nationally recognized standard, and shall bear their label on the completed unit.
11. Containers for storage of liquefied petroleum must be shop-inspected subject to *Rules of the Louisiana Petroleum Gas Commission*, 7919 Independence Boulevard, Baton Rouge, Louisiana 70806; telephone: 225.925.4895.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.

2. ASME: A, E, H, HLW, HV, M, S.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. Boilers under federal control.
2. Boilers on steam fire engines brought into the state for temporary use in times of emergency.
3. Portable boilers used for agricultural purposes only.
4. Boilers built for a pressure of 15 psig or less, for noncommercial use.
5. All potable water boilers and hot-water heaters, except the provisions of the section shall not be applicable to commercial potable water heaters of less than 50-gallon capacity, installed in commercial buildings.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Power boilers and high-pressure or high-temperature water boilers:

1. An annual external inspection followed by an internal inspection approximately six months after each external inspection. The interval between inspections may be extended for a period not to exceed 24 months on a stationary boiler provided:
 - a. Continuous water treatment under competent and experienced supervision has been in effect since the last internal inspection for the purpose of controlling and limiting corrosion and deposits;
 - b. Conditions are such that in the judgment of the assistant secretary, the inspection period may be extended.
2. Internal inspections may be extended up to 60 months on boilers that are adjunct to or part of a continuous process. Fee is \$200.00.

Low-pressure boilers:

A certificate inspection will be conducted biennially:

1. Steam or vapor boilers: An external inspection and internal inspection biennially where construction permits;
2. Hot-water heating and hot-water supply boilers: An external certificate inspection biennially, and – where construction permits — an internal inspection every six years based on date of construction;
3. Potable water boilers/hot-water heaters: An external certificate inspection biennially.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by deputy boiler inspectors.
2. Reports of inspections must be submitted to the boiler inspection section within 30 days on National Board forms.
3. The department must be notified of *suspension of insurance on account of dangerous conditions* or of *accidents to insured boilers* on National Board forms.
4. The department must be notified of *new business* or *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for not more than 14 months, is issued by the state fire marshal upon payment of a fee of \$20.00. Certificate valid for not more than 26 months: \$40.00.
2. All invoicing will be done by the boiler inspection section and mailed to the location.
3. No *Inspection Certificate* issued for an insured boiler shall be valid after the boiler for which it was issued ceases to be insured by a duly authorized insurance company.

STATE FEES

1. Potable water boilers/hot-water heaters - **\$15.00**
2. Heating boilers - **\$35.00**

3. External power boilers:
 - a. 100 square feet or less heating surface - **\$20.00**
 - b. Over 100 square feet to 1,000 square feet heating surface - **\$35.00**
 - c. Over 1,000 square feet heating surface - **\$70.00**
4. Internal power boilers:
 - a. 100 square feet or less heating surface - **\$50.00**
 - b. Over 100 square feet to 1,000 square feet heating surface - **\$75.00**
 - c. Over 1,000 square feet heating surface - **\$150.00**
5. Electric boilers:
 - a. External - **\$30.00**
 - b. Internal - **\$50.00**
6. Coil-type steam generators - **\$50.00**
7. Special inspection:
 - a. **\$250.00** plus expenses for up to one-half day;
 - b. **\$500.00** plus expenses for one day up to eight hours.
8. ASME or National Board shop reviews for *Certificate of Authorization* are **\$1,500.00** per location.
9. Quality control program reviews:
 - a. Boiler and pressure vessel manufacturers and repair organizations:
 - i. **\$250.00** plus expenses for up to one-half day;
 - ii. **\$400.00** plus expenses for one day up to eight hours.
 - b. Safety valve assembly and repair organizations:
 - i. **\$250.00** plus expenses for up to one-half day;
 - ii. **\$400.00** plus expenses for one day up to eight hours.
10. Nuclear surveys:
 - a. **\$250.00** plus expenses for up to one-half day;
 - b. **\$500.00** plus expenses for one day up to eight hours.

MISCELLANEOUS

1. The *National Board Inspection Code* is adopted for repairs and alterations.
2. *Certificate of Competency* examinations are held by the boiler examining board on the first Wednesday in March, June, September, and December. An initial boiler inspector's commission and identification card is issued (upon payment of a fee of \$40.00) to those inspectors successfully passing the examination and obtaining a *National Board Commission*, or to inspectors holding a *National Board Commission* and who have passed an acceptable examination in another state. A fee of \$20.00 is charged for the annual renewal of the identification card.
3. Upon completion of the installation of a boiler or at the time of the initial certificate inspection of an already installed boiler that has not been inspected and decalced according to these rules, a decal with the state serial number shall be placed in a conspicuous location on the boiler/water heater for identification.
4. All persons, firms, and corporations engaged in the installation, moving, and reinstallation of power boilers, steam-heating, or hot-water heating boilers in the State of Louisiana, with the exception of the City of New Orleans, shall be licensed by the state fire marshal to perform such work. Before such license is issued, the applicant must pass a written examination administered by the chief boiler inspector.
5. Before any boiler is installed, moved, or reinstalled, the licensed person, firm, or corporation must submit an application to the chief boiler inspector listing the location, manufacturer, type, serial number and National Board number of the boiler, and the expected date of installation completion.
6. A license is required for a fee of \$75.00, renewable annually, for the installation, moving, or reinstallation of power boilers, steam-heating boilers, and hot-water heating boilers. A written examination is required and is administered by the chief boiler inspector. Examination fee is \$50.00. A permit is also required. Fee is \$25.00 per unit for installation of each power boiler, steam-heating boiler, and hot-water heating boiler.
7. A license is not required to operate a boiler or pressure vessel; however, an operator is required to be in attendance during operation.

8. A copy of the boiler rules and regulations may be obtained by contacting the chief boiler inspector at 800.256.5452, or accessing the [department Web site](#).
9. National Board exam sitting fee is \$50.00. Fee is nonrefundable and good only for date requested.

MAINE



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STATE DEPARTMENT

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EMPOWERMENT

The Office of Professional and Occupational Regulation Director is empowered to make, alter, and amend rules pertaining to the Boiler Safety Program.
Boiler Board: No

DATE OF LAW PASSAGE: 1935

Date of latest amendment to law: October 2014.
Date rules and regulations implemented: 1935.
Date of latest rules and regulations: January 2005.
State statute: Maine Revised Statutes, Title 32. Professions and Occupations, Chapter 131. *Boilers and Pressure Vessels*, Sections 15101 through 15121.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XII.
2. ASME B31.1 (2004 Edition).
3. ASME CSD-1 (2002 Edition) with exception of Part CF.
4. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms before installation.
5. *National Board Inspection Code* (2001 Edition, 2002/03 Addendum).
6. National Board registration required for boilers and pressure vessels.
7. Special design or construction requires approval by the *Board of Boilers and Pressure Vessels*.
8. Any power boiler of longitudinal lap seam construction installed, registered, and operated in the state prior to January 1, 1951, shall not be operated in the state at steam pressures exceeding 15 psi (does not apply to miniature boilers).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, RP, S, U, U2, U3, UM, UV, V.
3. The State of Maine registration number preceded by the letters "ME", assigned by the department, must be stamped on power boilers in numerals and letters not less than 3/8-inch in height. Other jurisdictional objects must be tagged with an "H" number for low-pressure objects and "PV" number for pressure vessels.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal control.
2. Boilers and pressure vessels used for agricultural purposes only.
3. Boilers used solely for propelling motor road vehicles.
4. Boilers of steam fire engines brought into the state for temporary use in times of emergency to check conflagrations.
5. Low pressure steam heating boilers, hot water heating boilers, and hot-water supply boilers, except those located in schoolhouses or those used as process boilers.
6. Pressure vessels used for the transportation and storage of compressed or liquefied gases when constructed in compliance with specifications of the US Department of Transportation.
7. Pressure vessels installed on the right-of-way of railroads and used directly in the operation of trains.
8. Pressure vessels located on vehicles operating under the rules of other state authorities and used for carrying passengers or freight.
9. Pressure vessels located in private residences and apartment buildings with fewer than six apartments.
10. Pressure vessels having an internal or external operating pressure not exceeding 15 psi.
11. Vessels containing water under pressure, including those containing air, the compression of which serves only as a cushion, when none of the following limitations is exceeded:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210°F.
12. Pressure vessels containing water heated by steam or any other direct or indirect means when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 200°F;
 - c. A nominal water-containing capacity of 120 gallons.
13. Pressure vessels not exceeding:
 - a. 5 cubic feet in volume and 250 psig
 - b. 1-1/2 cubic feet in volume and 600 psig;
 - c. An inside diameter of 6 inches with no limitation on pressure.
14. Pressure vessels used as an integral part of a circuit breaker or transformer.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure boilers:
 - a. One annual internal certificate inspection;
 - b. One annual external inspection, in operation, approximately six months from the certificate inspection.
2. Miniature boilers:
 - a. One annual certificate inspection;
 - b. One biennial internal inspection.
3. Cast-iron boilers: one annual certificate inspection while unit is in operation.
4. Low pressure steam heating boilers located in schoolhouses: one annual certificate inspection, which shall be an internal inspection every third year, with an external or internal inspection at the discretion of the inspector on the two intervening years.
5. Low pressure hot-water supply boilers located in schoolhouses: one annual certificate inspection, which shall be an internal inspection where possible, every third year, with an external or internal inspection at the discretion of the inspector during the two intervening years.
6. Low pressure hot-water heating boilers located in schoolhouses: one annual certificate inspection, which shall be an internal inspection every third year, with an external inspection during the two intervening years.
7. Low pressure process boilers: one annual certificate inspection, which shall be an internal inspection every

third year, with an external inspection during the two intervening years at the discretion of the inspector.

8. Pressure vessels:

- a. Initial inspection shall be an external safety inspection;
- b. Renewal certificate inspections are completed once every 3 years and it shall be an internal where construction permits. In the event, that an internal inspection is not feasible, the inspector must use an alternative method of determining material thickness for the shell and/or head.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and licensed by the Boiler and Pressure Vessel Safety Program are accepted in lieu of inspections made by a department inspector. Insured objects are required to be inspected by the company providing insurance.
2. Reports of certificate inspections must be filed with the office within 30 days of the inspection. Reports of external inspections, other than certificate inspections or reports of accidents, shall be filed when any defect is found affecting safety of the boiler.
3. The Boiler and Pressure Vessel Safety Program must be notified within 10 days of *refusal of or suspension of insurance on account of dangerous conditions* on National Board forms.
4. The Boiler and Pressure Vessel Safety Program must be notified of *new business and discontinuance of insurance* on National Board forms.

CERTIFICATE OF INSPECTION

A *Certificate of Inspection* is issued by the Office of Professional and Occupational Regulation upon payment, by the owner/user, of a \$80.00 fee for each boiler or pressure vessel. Initial inspection of new or relocated power boilers must be completed by the jurisdiction. Plans must be submitted and approved by the jurisdiction.

STATE FEES

1. Internal inspections for high-pressure power boilers and high-pressure, high-temperature water boilers:
 - a. Boilers less than 2,000 square feet of heating surface - **\$75.00**
 - b. Boilers 2,000 square feet but less than 4,000 square feet heating surface - **\$100.00**
 - c. Boilers 4,000 square feet but less than 10,000 square feet heating surface - **\$150.00**
 - d. Boilers 10,000 square feet or more heating surface - **\$300.00**
2. External inspections for high-pressure power boilers and high-pressure, high-temperature water boilers:
 - a. Boilers of 50 square feet or less heating surface - **\$50.00**
 - b. Boilers over 50 square feet heating surface - **\$100.00**

For boilers where the only source of heat is electrical energy, the fees shall be based on one kilowatt being equal to one square foot of heating surface.

3. All classes of low-pressure boilers - **\$50.00**
4. Pressure vessels:
 - a. Internal or external of vessel having a cross-sectional area of 50 square feet or less - **\$25.00**
 - b. For each 100 square feet of area in excess of 50 square feet - **\$25.00**
5. Inspection Fees: Special trip or inspection by state-employed inspectors will be based on **\$50.00** per hour, at a minimum of four hours plus travel, lodging, and meals.

MISCELLANEOUS

1. Weld repairs must be made by a company utilizing a National Board Quality Control program. Routine repairs as defined in the NBIC are not valid. Special rules apply.
2. All safety valve and safety relief valve repairs shall be conducted under the supervision of an organization in possession of an ASME "V" or "UV" *Certificate of Authorization* or a National Board "VR" *Certificate of Authorization*. Adjustments to safety or safety relief set pressure or blowdown shall be performed under the supervision of an organization in possession of a *Certificate of Authorization*.
3. Examinations *to obtain a Commission from the National Board* are held by the chief inspector on the same schedule as the National Board examinations.
4. Renewal of Maine *Authorized Inspectors* is permitted without examination provided the individual has a valid, current *National Board Commission* and is employed by an insurance company permitted to sell boiler and pressure vessel insurance in this state. Initial issuance requires examinee to successfully pass a Maine

specific exam.

5. Rules provide for licensed engineers and operators for nonexempt high-pressure power, process, and heating installations.
6. Any welded repair must be authorized by the inservice inspector prior to completing repair.
7. Mechanical joints on a power boiler's major systems must be completed by an "R" stamp program.
8. All repairs/replacement of mechanical joints in code boundary of high-pressure boilers and B31.1 must have documentation available for the inspector to review and/or submitted to jurisdiction when required.
9. Alterations must be approved by jurisdiction.

MANITOBA



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PROVINCIAL DEPARTMENT

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EMPOWERMENT

Lieutenant governor-in-council empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1894

Date of latest amendment to law: March 1987.
Date rules and regulations implemented: 1897.
Date of latest rules and regulations: March 1997.
Provincial statute: Statutes of Manitoba, Section S210. *Steam and Pressure Plants Act*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (Current Edition, Current Addendum) B52, B139, N285, N286, N287, N289, N290, Z305.1, Z662.
2. ASME Code (Current Edition, Current Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
3. ASME Code addenda accepted automatically. ASME case interpretations usually accepted on individual basis.
4. ASME CSD-1 (Current Edition, Current Addendum).
5. ASME B31.1, B31.3, B31.4, B31.5, B31.8, B31.9, K61.1.
6. Manufacturers must file copy of the *Manufacturer's Data Report* with the department on special forms (Affidavit of Manufacturer) provided by the department, or show CRN and drawing numbers on the ASME *Manufacturer's Data Report*.
7. *National Board Inspection Code* (Current Edition, Current Addendum).
8. Manufacturers in the province must register with department and obtain authorization to fabricate and stamp boilers and pressure vessels for installation.
9. Special design or construction requires approval of the director.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted), VR.
2. ASME Code: H, S, U if manufactured in the United States.

Boilers and pressure vessels must include CRN and be shop-inspected and stamped by a department inspector or, at the discretion of the chief inspector, an inspector holding a National Board Commission.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, unfired pressure vessels, and refrigerating systems.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

All boilers, pressure vessels, and refrigeration systems. Relief valves and fittings are not subject to field inspections.

INSPECTIONS REQUIRED

1. Boilers and refrigeration systems: one annual inspection.
2. Unfired pressure vessels: one biennial inspection.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by a department inspector.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months on boilers and refrigeration systems and two years on unfired pressure vessels, is issued by the department.

PROVINCIAL FEES

1. Provincial inspection fees vary according to boiler horsepower, unfired pressure vessel dimensions, and refrigeration plant tonnage.
2. Provincial registration fees vary according to the heating surface of boilers and heat exchangers, unfired pressure vessel dimensions, and refrigeration plant tonnage.

MISCELLANEOUS

1. All Chief Engineers and operators of boiler, pressure vessel and refrigeration plants which are regulated by the Power Engineers Act and Regulations must be staffed by licensed Manitoba Power Engineers of the required class for those plants.

MARYLAND



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STATE DEPARTMENT

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Safety Inspection Unit
Boilers and Pressure Vessels
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EMPOWERMENT

Board of Boiler Rules empowered to make, alter, and amend regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1919 — AMENDED TO INCLUDE PRESSURE VESSELS: 1974

Date of latest amendment to law: July 2004.

Date rules and regulations implemented: 1975.

Date of latest rules and regulations: July 2004.

State statute: Annotated Code of Maryland, Public Safety Article, Title 12, Subtitle 9, *Boiler and Pressure Vessel Safety Act*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1998 Edition, 2000 Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI, and code cases (2000 Edition, Supplements 1, 2, 3).
2. ASME CSD-1 (1998 Edition, 1999 Addendum) with Errata CSD-1a-1999.
3. Boilers and pressure vessels required to meet ASME Code.
4. ASME B31.1 (1998 Edition, 2000 Addendum).
5. *National Board Inspection Code* (2001 Edition).
6. National Board registration required for boilers and pressure vessels.
7. NFPA 85.
8. Variances require approval by the Board of Boiler Rules.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R.
2. ASME Code: all.

Jurisdictional registration numbers will be assigned to all boilers and pressure vessels subject to inspection.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal control or regulation.
2. Pressure vessels used for the transportation and storage of compressed gases when constructed in compliance with specifications of the US Department of Transportation, and when charged with gas marked, maintained, and periodically re-qualified for use, as required by appropriate regulations of the US Department of Transportation.
3. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
4. Air tanks located on vehicles operating under the rules of other state authorities and used for carrying passengers or freight.
5. Pressure vessels operating at a working pressure not exceeding 15 psig. Vessels for containing water under pressure, including those containing air, the compression of which serves only as a cushion, when none of the following limitations is exceeded:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210°F.
6. Hot-water supply boilers directly fired with oil, gas, or electricity when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A nominal water-containing capacity of 120 gallons.
7. Pressure vessels not exceeding:
 - a. 5 cubic feet in volume and 250 psig;
 - b. 1-1/2 cubic feet in volume and 600 psig;
 - c. An inside diameter of 6 inches with no limitation on pressure.
8. Mechanical devices of the following types:
 - a. Pumps;
 - b. Compressors;
 - c. Turbines;
 - d. Generators;
 - e. Hydraulic and pneumatic cylinders.
9. Water-containing part of air conditioning or refrigeration system condensers or evaporators:
 - a. Using halo carbon refrigerant;
 - b. Constructed in accordance with the requirements of ANSI/ASH RAE Standard 15 in effect at the time of construction;
 - c. If neither of the following limitations is exceeded:
 - i. Design pressure of 300 psig;
 - ii. Design temperature of 210°F.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Boilers or pressure vessels located on farms and used solely for agricultural purposes.
2. Heating boilers which are located in private residences or in apartment houses of fewer than six family units.
3. Pressure vessels containing only water under pressure for domestic supply purposes, including those containing air, the compression of which serves only as a cushion or airlift pumping system, when located in private residences or in apartment houses of fewer than six family units.

INSPECTION REQUIREMENTS

1. Power boilers and high-pressure, high-temperature boilers:
 - a. Annual internal inspection when construction permits; otherwise, as complete an inspection as possible;

- b. Annual external inspection while under pressure, if possible.
- 2. Low-pressure boilers: a biennial certificate inspection.
- 3. Pressure vessels: a biennial certificate inspection.
- 4. Amusement attractions with low-pressure boiler and pressure vessel parts: annual certificate inspection.
- 5. Nuclear vessels within the scope of this act shall be inspected and reported on such form (Section XI) with appropriate information as designated by the board.
- 6. Model steam boilers (individually fabricated for noncommercial use, and primarily for demonstration, exhibition, or educational purposes, and not for profit): an annual external inspection and, to the extent possible, an internal inspection.
- 7. Antique boilers:
 - a. An annual internal inspection;
 - b. Externally inspected while under pressure, if possible.
- 8. Extended interval between internal inspections: the Board of Boiler Rules may extend the interval between inspections of certain power boilers to two years where:
 - a. The boiler has internal continuous water treatment under the general supervision of a registered professional engineer having experience in the treatment of boiler water;
 - b. The owner/user of such boiler keeps available for examination by the chief boiler inspector accurate records showing:
 - i. The date and actual time such boiler is out of service and the reason or reasons therefor;
 - ii. Such chemical and physical analysis of samples of the boiler water taken at regular intervals of not more than 48 hours of operation, as well as adequately showing the condition of such water and any elements or characteristics thereof which are capable of producing corrosion or other deterioration of the boiler or its parts.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies (special inspectors) and commissioned by the division are accepted in lieu of inspections made by a deputy inspector.
2. Upon request of any company operating pressure vessels within the state which are regularly inspected and rated by an established inspection service, under the supervision of one or more engineers whose qualifications are satisfactory to the Board of Boiler Rules and in accordance with the rules and regulations of the state, the Commissioner of Labor and Industry may issue a commission to any inspector of said company as special inspector.
3. The reports of inspection shall be filed within 30 days after the inspection except inspections made by an owner/user special inspector, which shall be filed annually.
4. Accidents, failures, and hazardous conditions affecting the safety of a boiler or pressure vessel found at the time of an inspection shall be reported to the chief boiler inspector within 24 hours.
5. The chief boiler inspector should be notified immediately and a report submitted on a boiler or pressure vessel found by a special inspector to be in such condition that *insurance is refused or because of unsafe conditions*.
6. The chief boiler inspector must be notified within 30 days when boiler or pressure vessel *insurance is canceled, not renewed or suspended*.
7. The authorized insurer shall develop a database report of boilers and pressure vessels that it insures. The database report and annual updates to the database shall be submitted to the chief boiler inspector by January 15 of each year.
8. The owner/user shall develop a database of pressure vessels it owns. The database report and annual update to the database shall be submitted to the chief boiler inspector by January 15 of each year.
9. An authorized insurer shall develop a quality assurance program that defines its operational procedures. The quality assurance program and its annual updates shall be submitted to the chief boiler inspector by January 15 of each year.

CERTIFICATE OF INSPECTION

1. Upon inspection, a boiler or pressure vessel shall be found suitable and conforming to the rules and regulations of the Board of Boiler Rules, the chief boiler inspector shall issue to such owner/user a *Certificate of Inspection* specifying the maximum pressure which the boiler or pressure vessel may be allowed to carry.
2. No *Certificate of Inspection* issued for a boiler or pressure vessel inspected by a special inspector shall be valid after the boiler or pressure vessel for which it was issued ceases to be insured by a duly authorized insurance company.

3. *Certificate of Inspection* shall be valid for 12 months for power boilers, antique boilers, and model steam boilers, and 24 months for low-pressure boilers and pressure vessels.
4. Operation of a boiler or pressure vessel without a valid *Certificate of Inspection* may be cause for a fine of not more than \$5,000.00 and/or imprisonment for up to five years.

STATE FEES

1. Certificate inspections by deputy boiler inspectors:
 - a. Initial certificate inspection of a boiler or pressure vessel not previously registered in Maryland - No charge
 - b. Certificate inspection of a boiler or pressure vessel, other than a pressure vessel attached to an air compressor, previously registered in Maryland - **\$40.00**
 - c. Certificate inspection of a pressure vessel previously registered in Maryland, attached to an air compressor - **\$10.00**
 - d. Certificate inspection of an additional boiler or pressure vessel registered in Maryland, at the same location, on the same day - **\$10.00**
 - e. Follow-up inspection to determine compliance - **\$50.00**
2. Certificate inspection of antique or model steam boilers - **\$15.00**
3. Investigation of an accident or complaint - No charge
4. National Board joint reviews shall be charged at the following rate, plus all travel and hotel costs:
 - a. Half day (up to four hours) - **\$250.00**
 - b. Full day (up to eight hours) - **\$500.00**

MISCELLANEOUS

1. Examinations for *Certificate of Competency (National Board Commission)* are held by the chief boiler inspector on the first Wednesday in March, June, September, and December. An examination fee of \$50.00 is required.
2. *Reciprocal Commission* is issued to an inspector holding a valid *National Board Commission* for a fee of \$50.00.
 - a. Commission renewal or replacement fee is \$50.00;
 - b. The company shall return the special inspector's Maryland commission to the chief boiler inspector within 30 days of employment termination. If not, a \$50.00 replacement fee will be charged;
 - c. *Special Inspector's Commission* may be renewed prior to its expiration date if:
 - i. The employer pays a renewal fee;
 - ii. Evidence is submitted that the special inspector remains in the employment of the company;
 - iii. The special inspector has been trained on current boiler and pressure vessel technology in accordance with the regulations adopted by the commissioner under this subtitle.
3. Operators of power boilers require a license in the city of Baltimore.
4. Only shops possessing a valid National Board "R" symbol stamp may make welded repairs or alterations.
5. New, rental, and portable boiler and pressure vessel installations shall be reported to the chief boiler inspector within 30 days prior to installation.
6. To obtain a copy of the *Boiler and Pressure Vessel Safety Act* and regulations, see Web site address.

MASSACHUSETTS



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STATE DEPARTMENT

Thomas G. Gatzunis, Commissioner

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EMPOWERMENT

Board of Boiler Rules empowered to make, alter, and amend rules and regulations; said rules and regulations to have the force of law when filed by the commissioner in the office of the Secretary of State.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1895

Date of latest amendment to law: November 1997.
Date rules and regulations implemented: 1896.
Date of latest rules and regulations: March 2000.
State statute: The General Laws of Massachusetts, Part I. Administration of the Government, Title 20. Public Safety and Good Order, Chapter 146. *Inspection of Boilers, Air Tanks, etc.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition), Sections I, II, III (Division 1), IV, V, VIII (Division 1) (only as applied to compressed air receivers and vessels holding liquids and/or gases for refrigerants), IX, X, XI.
2. ASME CSD-1, Part CW (1977 Edition).
3. *National Board Inspection Code* (2004 Edition).
4. Special design or construction requires approval by the Board of Boiler Rules.
5. Chapter 142, Sections 17, 18 and 19 of the General Laws, relates to the marketing, construction and installation of hot-water tanks and hot-water heaters. This comes under the jurisdiction of the plumbing inspection departments of the city or town in which the units are to be installed. Construction shall comply with the ASME Boiler and Pressure Vessel Code.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: H, M, N, NA, NPT, NV, PP, S, U, UM.

OBJECTS SUBJECT TO RULES FOR INSPECTION AND STAMPING

1. All boilers, refrigeration and air conditioning systems, except when under the jurisdiction of the federal government.
2. All heating boilers operating at 15 psi or less steam pressure, or 160 psi and/or 250°F water pressure and temperature, except when:

- a. Having less than 4 square feet grate surface;
 - b. Having a steam capacity less than 104 pounds per hour;
 - c. Used as a hot-water heating boiler with an output capacity less than 200,000 BTU per hour;
 - d. Used as a hot-water (or other liquid) supply boiler, having a heat input less than 200,000 BTU per hour, a water (or other liquid) temperature less than 200°F or a nominal water-containing capacity less than 120 gallons.
3. All air tanks, except when:
- a. The inside diameter is less than 6 inches;
 - b. The operating pressure is less than 50 psi;
 - c. The capacity is less than 1 cubic foot.
4. Refrigerant-containing pressure vessels shall comply with the requirements of ASME Code Section VIII when:
- a. The inside diameter exceeds 6 inches and the internal or external pressure exceeds 15 psi;
 - b. Tanks exceeding 5 cubic feet in volume or 250 psig design pressure stamped with the "UM" symbol are NOT acceptable. Manufacturers of "UM" tanks that do not exceed these limits must register with the department;
 - c. "UM"-stamped pressure vessels are acceptable when the manufacturer keeps a record of the materials used and tests made.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except tanks temporarily holding oil and air for the purpose of lifting automobiles or operating hydraulic machinery, which require an inspection performed by the State District Engineering Inspector when first installed.

INSPECTIONS REQUIRED

1. Steel and cast-iron boilers used for power-, process-, or steam-heating:
 - a. One annual internal inspection;
 - b. One annual external inspection with boiler in service at approximately a six-month interval from the internal inspection.
2. Hot-water heating and hot-water supply boilers:
 - a. One inspection annually;
 - b. One internal inspection every three years where construction permits.
3. Air tanks: one internal inspection every two years.
4. Refrigeration and air conditioning systems: one annual inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections, except first inspections, made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Every insurance company, or a re-insurer, authorized to insure boilers and pressure vessels in the commonwealth and making inspections of such boilers and pressure vessels, shall have in its employ at least one inspector who holds a *Certificate of Competency* under Section 62 and who resides in the commonwealth.
3. *Report of Inspection* must be filed with the department, on approved forms, within two weeks after the inspection.
4. All insurance companies shall notify the department, on forms furnished or approved by the department, of all boiler risks *written, canceled, not renewed, or suspended because of dangerous conditions*.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for one year for boilers, refrigeration, and air conditioning systems, and two years for air tanks, is issued by the inspector.

STATE FEES

1. Each steam boiler internal inspection - **\$100.00**
2. Each cast-iron or hot-water boiler inspection (external) - **\$100.00**
3. Each visit for external inspection under steam - **\$50.00**
4. Each air tank inspection - **\$50.00**
5. Each refrigeration and air conditioning system - **\$60.00**
6. Each boiler or pressure vessel certificate - **\$50.00**

Plus \$2.00 per ton in excess of 20 tons to a maximum fee of \$300.00.

MISCELLANEOUS

1. Repair organizations must have the National Board "R" stamp.
2. Examinations for *Certificate of Competency* are held the day following the National Board exam (the Friday following the first Wednesday in March, June, September, and December).
3. An inspector in the employment of an authorized insurance company who holds a *National Board Commission* shall be given an examination for a Massachusetts *Certificate of Competency* to inspect boilers, air tanks, refrigeration and air conditioning systems, provided he/she files an application issued by the department, together with a copy of his/her *National Board Commission*, and pays a fee of \$50.00. Applicants are given an oral examination before a three-person board covering state laws and regulations. Examinations are recorded.
4. *Certificate of Competency*, valid for two years and renewable for a fee of \$100.00, is issued by the department and expires on the anniversary of the holder's date of birth. A re-examination is required if the inspector allows the certificate to lapse beyond one year.
5. A license is required for operators of high-pressure steam boilers.
6. A copy of the *Massachusetts General Laws and Regulations* may be purchased through the Statehouse Book Store at 617.727.2834 or viewed from the department Web site at www.mass.gov/dps.

MIAMI, FLORIDA

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MUNICIPAL DEPARTMENT

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EMPOWERMENT

Board of Rules and Appeals empowered to make, alter, and amend rules and regulations.

Boiler Board: No.

DATE OF LAW PASSAGE: 1950

Date of latest amendment to law: March 2002.

Date rules and regulations implemented: 1950.

Date of latest amendment to rules and regulations: March 2002.

City ordinance: Miami-Dade County Code of Ordinance 2002, Article 1. Administration, Chapter 8. *Building Code*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, IV, and VIII (Divisions 1, 2).
2. Code addenda and case interpretations accepted automatically.
3. Manufacturers are required to file a copy of the *Manufacturer's Data Report* with the department before installation. Permit forms are required and furnished by the department.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: none.
2. ASME Code: none.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels are subject to the rules for construction and stamping, except the following:

1. Boilers and pressure vessels under federal control;
2. Unfired pressure vessels meeting the requirements of the US Department of Transportation;
3. Boilers requiring annual inspection and certification by the State of Florida, Bureau of Explosives and Fire Equipment, Boiler Safety Section.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure boilers: One annual inspection.
2. Low-pressure boilers: One annual inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Initial installation inspection must be made by Building Department. Inspections made by inspectors employed by insurance companies and commissioned by the State of Florida are accepted with department inspections.
2. The department must be notified of *suspension of insurance on account of dangerous conditions, new business, and discontinuance of insurance*.
3. Reports of inspections must be filed with the department on department forms within 15 days after inspection.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months, is issued by the department upon payment of inspection fees.

MIAMI - DADE COUNTY, FLORIDA

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MUNICIPAL DEPARTMENT

Harold Schoendorf, Mechanical Division Director
Miami-Dade County Building Department
Herbert S. Saffir Permitting and Inspection Center
11805 SW 26 Street (Coral Way), Room 137
Miami, FL 33175-2474

Telephone — 786.315.2082
Email — Z430@miamidade.gov
Fax — 786.315.2907

EMPOWERMENT

Board of Rules and Appeals empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1950

Date of latest amendment to law: March 2002.
Date rules and regulations implemented: 1950.
Date of latest amendment to rules and regulations: March 2002.
County ordinance: Miami-Dade County Code of Ordinance 2002, Article 1. Administration, Chapter 8. *Building Code*, 2004 Florida Building Code Mechanical (October 1, 2005) *Installation or Replacement of Steam, Hot Water, and Unfired Pressure Vessels*. FLA 2007 Building Codes effective March 1, 2009.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, IV, VIII (Divisions 1, 2), and code cases.
2. Code addenda and case interpretations accepted automatically.
3. Code rules updated annually.
4. ASME B31.1 (2001 Edition), B31.9 (2002 Edition).
5. Submission of *Manufacturer's Data Report* is required. Permit forms are furnished by the department.
6. Unfired pressure vessels used in the operation of refrigeration or air conditioning shall comply with the requirements of the county building, plumbing, and electrical codes.
7. Special design or construction requires approval of the Board of Rules and Appeals.
8. A permit must be obtained to make new installations and for reinstallations.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: none.
2. ASME Code: none.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

1. All steam boilers.
2. All unfired pressure vessels operating at a pressure in excess of 60 psi and having a capacity more than 5 cubic feet.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers and unfired pressure vessels under federal control.

2. Boilers and unfired pressure vessels located on boats, vessels, and other floating equipment.
3. Boilers operating at a pressure less than 15 psi when provided with an unassisted gravity return.
4. Boilers used exclusively for heating purposes when provided with an unassisted gravity return.
5. Air tanks used solely for the operation of railroad signals and switches (when inspected annually by a competent inspector employed by the railroad company and when stamped with inspection date).
6. Boilers requiring annual inspection and certification by the State of Florida Bureau of Explosives and Fire Equipment, Boiler Safety Section.
7. Portable boilers and unfired pressure vessels.

INSPECTIONS REQUIRED

1. High-pressure steam boilers: one semi-annual inspection.
2. Unfired pressure vessels: one annual inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Reports of internal inspection must be filed with the department on National Board forms within 15 days.
2. The department must be notified of *suspension of insurance on account of dangerous conditions*.
3. The department must be notified of *new business* and *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection for boilers and unfired pressure vessels, valid for 12 months, is issued by the department upon inspection and payment of the following certificate fees:

Annual inspection fees:

1. High-pressure steam boilers (fee includes semi-annual inspection) - **\$178.90**
2. Unfired pressure vessels - **\$65.84**
3. Hot-water boilers - **\$74.43**
4. Miniature boilers - **\$65.76**

MUNICIPAL FEES

1. Installation permit fees (FY 2009 – 2010) include initial inspection and certificate (does not include installation or connection of fuel and water lines).
2. Heating boilers (each):
 - a. Less than 837,000 BTU per hour - **\$107.34**
 - b. 837,000 BTU per hour to 6,695,000 BTU per hour - **\$128.81**
 - c. Over 6,695,000 BTU per hour - **\$178.90**
 - d. Steam-driven prime movers - **\$85.88**
 - e. Steam-actuated machinery - **\$85.88**
 - f. Unfired pressure vessels (operating at pressures in excess of 60 psi and having volume of more than 5 cubic feet) - **\$107.34**

MISCELLANEOUS

1. Operator's license is not required to operate a boiler.
2. For boilers, water heaters and pressure vessels, see *Florida Building Code 2004 (Mechanical)*, Chapter 10.
3. Annual certification for boilers and unfired pressure vessels per Chapter 8, Miami-Dade County Code.

MICHIGAN



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STATE DEPARTMENT

David Stenrose, Assistant Chief, Boiler Division
Department of Licensing and Regulatory Affairs
Bureau of Construction Codes
P.O. Box 30254
Lansing, MI 48909

Telephone — 517.241.9334
Email — stenrosed@michigan.gov
Fax — 517.241.6301

Express mail only:
611 W. Ottawa St.
Lansing, Mi 48909

EMPOWERMENT

Empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1917 — NEW LAW: 1966

Date of latest amendment to law: Effective December 1, 2015
Date rules and regulations implemented: 1967.
Date of latest amendment to rules and regulations: November 30, 2013
State statute: Michigan Compiled Laws, *Boiler Act of 1965*, Sections 408.751 through 408.776.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition, 2011 Addendum), Sections I, II, III, IV, V, VIII (Division 1), IX, XI; code cases; Section VIII (Division 1) required for blowdown tanks, separators, and flash tanks only.
2. Code rules are updated every three years or when authorized by department.
3. ASME CSD-1 (2009 Edition).
4. ASME B31.1 (2010 Edition).
5. ASME B31.3 (2010 Edition).
6. Before installation, manufacturers must file with the chief inspector a copy of the *Manufacturer's Data Report* for each boiler — signed by a National Board-commissioned inspector. Exceptions: Cast boilers and all boiler blow-off tanks and separators.
7. *National Board Inspection Code* (2011 Edition).
8. National Board registration required for boilers, blowdown separator, and flash tanks.
9. Special design or construction requires approval by the Board of Boiler Rules.
10. Welding of cast-iron is not permitted.
11. Foreign codes must be submitted to and approved by the Board of Boiler Rules.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (for high-pressure repair and alteration to boilers).
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, NV, PP, S, U, V.

All boiler blow-off tanks and separators shall be constructed in accordance with ASME Code Section VIII, and Michigan Rules, and must be stamped "National Board."

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. Those under federal control.
2. Swimming pool heaters and open car-wash heaters. Similar type equipment with no intervening valves on the return or discharge piping, and having no reduction in pipe size in the return or discharge piping (not generating more than normal circulating pump pressure).
3. Miniature steam or marine engines for hobby usage.
4. A boiler used in power plants of self-propelled vehicles designed primarily for the transportation of persons or property upon a highway, except vehicles used exclusively upon stationary rails or tracks.
5. Boilers used on mint farms for mint processing.
6. A non-vaporizing, organic-fluid boiler, if the boiler meets all of the following criteria:
 - a. The system is vented and does not have valves or restrictions in the pipe between the boiler and vent;
 - b. The vent pipe is sized so that the thermal expansion of the fluid will not result in an increase in pressure on the system, which is verifiable with engineering data;
 - c. The owner/user provides the Boiler Division of the department with calculations performed by an engineer which verify that pressure due to thermal expansion cannot exist in the boiler as installed.
7. A low-pressure steam boiler that has a volume of less than 5 cubic feet and that does not have piped feed connect
8. Those on Tribal Land. (Unless a written request by the tribal chief has been submitted to the Boiler Division).

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Boilers used solely for agricultural purposes.
2. Steam or vapor boilers not exceeding 15 psi and hot-water boilers not exceeding 160 psi or a temperature of 250°F (located in private residences or apartment or condo buildings of fewer than six families).

INSPECTIONS REQUIRED

1. A power boiler, process boiler, or high-pressure, high-temperature water boiler shall receive a certificate inspection annually and shall also be externally inspected annually, while under pressure, within six months from the date of the internal inspection.
2. A low-pressure steam or vapor heating boiler shall receive a certificate inspection biennially.
3. Hot-water heating and hot-water supply boilers shall receive a certificate inspection triennially.
4. A non-vaporizing, organic-fluid boiler that is not exempt under these rules shall receive an external certificate inspection triennially.
5. A miniature hobby locomotive boiler shall receive a certificate inspection annually.
6. Antique traction boilers: triennial inspection for noncommercial, and annual inspection for commercial.

All inspections of newly installed and secondhand boilers must be made by a department inspector.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections, except first inspections and inspections of secondhand boilers, made by inspectors employed by insurance companies and licensed by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of internal inspections must be filed with the department on department forms within 30 days after inspection.
3. Reports of external inspections within 6 months of the internal inspection for power, process, or high temperature water boilers are not required unless a dangerous condition exists.
4. The department must be notified of *refusal of or suspension of insurance on account of dangerous conditions*.

5. The department must be notified of *new business* and *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

1. An inspector who is properly licensed to inspect boilers in this state shall thoroughly inspect a boiler that is used or proposed to be used in this state as to its construction, installation, and condition as follows:
 - a. A power boiler, process boiler, or high-pressure, high-temperature water boiler shall receive a certificate inspection annually and shall also be externally inspected annually, while under pressure, within six months from the date of the internal inspection.
 - b. A low-pressure steam or vapor heating boiler shall receive a certificate inspection biennially.
 - c. Hot-water heating and hot-water supply boilers shall receive a certificate inspection triennially, with an internal inspection at the discretion of the inspector.
 - d. A non-vaporizing, organic-fluid boiler that is not exempt under these rules shall receive an external certificate inspection triennially.
 - e. A miniature hobby locomotive boiler shall receive a certificate inspection annually.
 - f. A grace period of two months beyond the periods specified in subdivisions (a) to (e) may elapse between certificate inspections, and the board may permit longer periods between certificate inspections.
 - g. Internal inspection of cast boilers shall be at the discretion of the inspector.
2. The certificate inspection shall be an internal inspection if construction allows, otherwise the certificate inspection shall be as complete an inspection as possible unless specified otherwise under this rule.
3. The chief inspector, deputy inspector, or a special inspector provided for in the act shall make the inspections specified in this rule.
4. If, at the discretion of the inspector, a hydrostatic test is necessary, the boiler owner/user shall ensure that the test is performed in the presence of the inspector.
5. Certificate inspection reports submitted by electronic interface shall be in a format acceptable to the Boiler Division.
6. Certificate inspection reports submitted to the boiler division for data entry shall be assessed a fee of **\$2.00** per report.

STATE FEES

1. Licenses:
 - a. Installer examination - **\$100.00**
 - b. Installer renewal - **\$80.00**
 - c. Repairer examination - **\$100.00**
 - d. Repairer renewal - **\$80.00**
 - e. Inspector examination - **\$100.00**
 - f. Inspector renewal - **\$50.00**
 - g. Boiler operator registration - **\$80.00**
 - h. Boiler operator examination - **\$100.00**
 - i. Boiler operator registration renewal - **\$80.00**
 - j. Stationary engineer registration - **\$80.00**
 - k. Stationary engineer written examination - **\$100.00**
 - l. Stationary engineer registration renewal - **\$80.00**
 - m. 3rd class stationary engineer oral examination - **\$150.00**
 - n. 2nd class stationary engineer oral examination - **\$200.00**
 - o. 1st class stationary engineer oral examination - **\$250.00**
 - p. The reprinting of a registration more than 30 days after the issuance date - **\$30.00**
2. Permit applications:
 - a. Nuclear installation permit application - **\$1,380.00**
 - b. Nuclear repair permit application - **\$400.00**
 - c. Low-pressure installation permit application - **\$75.00**

- d. Repair permit application - Low Pressure, Repair, Alter - **\$75.00**
 - High Pressure, H.P. Piping - **\$120.00**
 - High Pressure Piping - **Plus .05 cents/foot**

Permit application fees are nonrefundable.

3. Certificates - **\$60.00** The reprinting of a registration more than 30 days after the issuance date - **\$30.00**

4. Inspections:

- a. Power boilers – 150 square feet or less - **\$70.00**
- b. Power boilers – 151 square feet to 4,000 square feet - **\$165.00**
- c. Power boilers – 4,001 square feet to 10,000 square feet - **\$180.00**
- d. Power boilers – 10,001 square feet and over - **\$205.00**
- e. Low-pressure heating boiler without manhole - **\$70.00**
- f. Inspection of an additional low-pressure heating boiler without manhole at the same physical location, on the same date - **\$60.00**
- g. Low-pressure heating boiler with manhole - **\$85.00**
- h. Low-pressure hot-water supply boiler - **\$60.00**
- i. Inspection of an additional low-pressure hot-water supply boiler at the same physical location, on the same date - **\$45.00**
- j. Low-pressure process boiler without manhole - **\$70.00**
- k. Low-pressure process boiler with manhole - **\$85.00**
- l. Miniature hobby locomotive boiler - **\$15.00**

5. Special Inspections:

- a. The boiler division shall provide special inspections not otherwise covered in the fee schedule. The charge for this service shall be at the rate of \$100.00 for the first hour and \$100.00 for each additional hour, plus lodging, meals, transportation, and other related expenses incurred for performing special inspections.
- b. Fees required under these rules shall be paid by cash, money order, or check. Money orders or checks shall be made payable to "State of Michigan."

MISCELLANEOUS

1. Examinations for *Certificate of Competency* are held by the department on the first Wednesday and Thursday in March, June, September, and December. See STATE FEES.
2. Licenses must be renewed annually by January 1. See STATE FEES.
3. *Reciprocal License* is issued to an inspector holding a *National Board Commission* ("IS") or a *Certificate of Competency* issued by a state with a standard of written examination approved by the Board of Boiler Rules. See STATE FEES.
4. Permits must be obtained from the department for the installation, alteration, or repair of new, secondhand, or relocated boilers and high pressure piping.
5. Permits may only be issued to boiler installers and repairers licensed by the department. Permits must be obtained for the installation of all boilers, regardless of type, location, or pressure, except those exempt under OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.
6. All boilers shall be marked with a Michigan serial number.
7. A copy of the Boiler Rules and Regulations may be obtained by sending a request to:

Bureau of Construction Codes
Boiler Division
P.O. Box 30255
Lansing, MI 48909

A charge of \$25.00 or (free at www.michigan.gov/bcc)

8. An Operators Registration Program is administered by the division.

MILWAUKEE, WISCONSIN



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MUNICIPAL DEPARTMENT

Jillian Klug, Chief Boiler Inspector
Department of Neighborhood Services
841 North Broadway, 10th Floor
Milwaukee, WI 53202-3613

Telephone — 414.286.2536
Fax — 414.286.3939
Email — jklug@milwaukee.gov

EMPOWERMENT

Building Code Committee empowered to make, alter, and amend rules and regulations.

Boiler Board: No.

DATE OF LAW PASSAGE: 1911

Date of latest amendment to law: October 2000.
Date rules and regulations implemented: 1914.
Date of latest amendment to rules and regulations: June 2012
City ordinance: Milwaukee City Charter, Chapter 223. *Boilers* and Wisconsin Administrative Code, Chapter 341. *Boiler and Pressure Vessel Code*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

City of Milwaukee adopted the State of Wisconsin Administrative Code, except Section 341.08, which concerns fees.

Stamping:

Where appropriate, the following National Board stamps or ASME Code stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: All.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and unfired pressure vessels.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers or pressure vessels which receive regular inspections by United States government inspectors.
2. Heating boilers located in private residences or apartment buildings having fewer than three living units.
3. Expansion tanks for hot-water heating boilers having an operating pressure of less than 50 psig with no limitations on size.
4. Boilers used exclusively for agricultural purposes.

5. Hot-water supply boilers, water heaters, and hot-water storage tanks.
6. Pressure vessels that do not exceed:
 - a. 6 inches inside diameter with no limit on pressure;
 - b. 5 cubic feet in volume and an operating pressure of 250 psi;
 - c. 1-1/2 cubic feet in volume with no limit on pressure.
7. Pressure vessels used in accordance with regulations of the US Department of Transportation.
8. Pressure vessels used for storage or processing of cold water, including those with air cushions.
9. Pressure vessels with an internal or external operating pressure of not more than 15 psig with no limitation on size.
10. Air receivers having a volume of less than 90 gallons and a working pressure less than 200 psig as stamped on the manufacturer's nameplate.
11. Pressure vessels used in processing and storing of fermented beverages at temperatures not exceeding 140°F.

INSPECTIONS REQUIRED

1. Power boilers: One annual internal inspection. Where an internal inspection is not possible because of boiler construction, an external inspection will be acceptable. Should operating conditions require longer periods, an extension of time may be granted upon written application to the department with written concurrence of inspection agency.
2. Low-pressure steam and hot-water boilers: one external or internal inspection every 36 months.
3. Pressure vessels: one external or internal inspection every 36 months.
4. Anhydrous ammonia storage and nurse tanks: one inspection every 36 months.
5. Power piping: welder documentation and material inspection prior to start of fabrication (installed to ASME B31.1).

INSURANCE INSPECTION REQUIREMENTS

1. The department must be notified of *suspension of insurance because of dangerous conditions*.
2. The department must be notified of *new business or discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the State of Wisconsin.

MUNICIPAL FEES

There is a **\$5.00** processing fee for each permit type, and a **1.4%** surcharge added to all fees.

1. Boilers: Permit fee for installation or replacement of a boiler shall be **\$50.00** per unit not exceeding 150,000 BTU per hour of input. For each additional 50,000 BTU per hour or fraction thereof, an additional fee of **\$10.00** shall be charged.
2. Unfired pressure vessels: permit fee for installation of an unfired pressure vessel shall be **\$50.00** per vessel.
3. Power piping: permit fee for installation of power piping shall be **\$15.00** per 100 feet of piping. Minimum fee shall be **\$50.00**.
4. Repairs: permit fee for repairs of boilers and pressure vessels shall be **\$40.00**.
5. Electronic monitoring: permit fee for installation of electronic monitoring shall be computed at **\$100.00** for each boiler.
6. Periodic inspections – power boilers:
 - a. 0 – 250 square feet of heating surface - **\$130.00**
 - b. More than 250 square feet of heating surface - **\$200.00**
7. Periodic inspections – heating boilers:
 - a. 0 – 200,000 BTU per hour - **\$90.00**
 - b. More than 200,000 BTU per hour - **\$150.00**
8. Unfired pressure vessels:

- a. 1 – 12 cubic feet volume - **\$75.00**
- b. More than 12 cubic feet volume - **\$110.00**
- 9. Air conditioning and refrigeration systems - **\$75.00**
- 10. Reinspection fee of **\$75.00** shall be assessed for inspections made by department to gain compliance with rules of Chapter 223, after orders have been issued by the department.
- 11. Hydrostatic tests for boilers and unfired pressure vessels - **\$90.00**.
- 12. Quality control review fee of **\$75.00** per hour, or fraction thereof, shall be charged for review of an organization's quality control manual (minimum of two hours).

MISCELLANEOUS

- 1. Repairs/alterations in accordance with *National Board Inspection Code*.
- 2. Insurance inspectors are required to hold a commission issued by the *State Industrial Commission*.
- 3. Operators of boilers and pressure vessels are required to be licensed.
- 4. A permit is required to install or repair boilers and pressure vessels.

MINNESOTA



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NOTE: Access to Web sites posting jurisdiction laws, rules, and regulations is provided only as a convenience to Synopsis users. The regulatory information therein is beyond the control of the National Board. As such, users of this data should exercise caution when making decisions of a critical nature. The National Board assumes no responsibility for information posted on external Web sites.

STATE DEPARTMENT

Joel T. Amato, Chief Boiler Inspector
Minnesota Department of Labor and Industry
Construction Codes and Licensing Division
Boiler Division
443 Lafayette Road
St. Paul, MN 55155-4304

Telephone — 651.284.5137
Email — joel.amato@state.mn.us

EMPOWERMENT

Commissioner of Labor and Industry empowered to make, alter, and amend rules and regulations.
Boiler Board: No. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1881

Date of latest amendment to law: 2010 .
Date rules and regulations implemented: 1881.
Date of latest rules and regulations: November 2004.
State statute: Minnesota Statutes – 2010, Chapters 326B.93 to 326B.998, *Boilers*. Minnesota Rules – Chapter 5225.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI, and code cases.
2. ASME CSD-1 (Current Edition).
3. ASME B31.1 (Current Edition).
4. ASME PVHO.1 (Current Edition).
5. Code addenda and case interpretations accepted automatically.
6. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms, except tanks or cylinders used for storage or transfer of liquefied petroleum gases for which data reports are not required.
7. Registration with the National Board of non-ASME Code items and use of these items is allowed to comply with GATT and NAFTA treaties.
8. *National Board Inspection Code* (Current Edition).
9. National Board registration required for boilers and pressure vessels.
10. CSA B51 (2001 Edition) with National Board registration number.
11. Special design or construction requires approval of the chief boiler inspector.

12. Minnesota Steam Fitters Contractors License required for all high-pressure steam piping, hot-water used for heating over 30 psi and 250° F and ammonia refrigeration piping. Contact Chief HPP Inspector Todd Green at 651.284.5124 with high-pressure piping questions.
13. Minnesota requires all inspectors to have the National Board "A" endorsement to review and accept repairs to boilers and pressure vessels.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all. PP, S, or A stamp required up to first stop valve. High-pressure piping license and permit required beyond boiler.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and unfired pressure vessels, except the following:

1. Boilers and pressure vessels under federal control.
2. Boilers and pressure vessels in buildings occupied solely for residential purposes with accommodations for not more than five families.
3. Railroad locomotives operated by railroad companies for transportation purposes.
4. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
5. Unfired pressure vessels having an internal or external working pressure not exceeding 15 psig with no limit on size.
6. Pressure vessels used for storage of compressed air not exceeding 5 cubic feet in volume and equipped with an ASME Code-stamped safety valve set at a maximum of 100 psig.
7. Pressure vessels having an inside diameter not exceeding 6 inches.
8. A vessel containing water under pressure, including those containing air which serves only as a cushion, when none of the following limitations is exceeded:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210°F.
9. Boilers or pressure vessels located on farms and used solely for agricultural or horticultural purposes.
10. Tanks or cylinders used for storage or transfer of liquefied petroleum gases.
11. Unfired pressure vessels in petroleum refineries.
12. An air tank or pressure vessel which is an integral part of a passenger motor bus, truck or trailer.
13. Hot-water heating and other hot-liquid boilers not exceeding a heat input of 750,000 BTU per hour.
14. Hot-water supply boilers (water heaters) not exceeding a heat input of 500,000 BTU per hour, a water temperature of 210°F, a nominal capacity of 120 gallons or a pressure of 160 psig.
15. Laundry and dry cleaning pressers not exceeding 5 cubic feet of steam volume.
16. Pressure vessels operated full of water or another liquid not materially more hazardous than water, if the vessel's contents do not exceed 210°F or a pressure of 200 psig.
17. Steam-powered turbines at papermaking facilities powered by steam district facilities at a remote location.
18. Manually-fired boilers for model locomotive, boat, tractor, stationary engine, or antique motor vehicles constructed or maintained only as a hobby for exhibition, educational, or historical purposes, not for commercial use; provided that such boilers have an inside diameter of 12 inches or less, or a grate area of 2 square feet or less and are equipped with an ASME-stamped safety valve of adequate size, a water level indicator and a pressure gage.
19. Any pressure vessel used as an integral part of an electrical circuit breaker.
20. Pressure vessels used for the storage of refrigerant if they are built to ASME code specifications, registered with the National Board, and equipped with an ASME code stamped pressure relieving device set no higher than the maximum allowable working pressure of the vessel. This does not include pressure vessels used in ammonia refrigeration systems.
21. Pressure vessels used for storage of oxygen, nitrogen, helium, carbon dioxide, argon, nitrous oxide, or other medical gas, provided the vessel is constructed to ASME or Minnesota Department of Transportation specifications and equipped with an ASME code stamped pressure relieving device. The owner of the vessel shall perform annual visual inspections and planned maintenance on these vessels to ensure vessel integrity.
22. Pressure vessels used for the storage of compressed air for self-contained breathing apparatuses.
23. Hot water heating or other hot liquid boilers vented directly to the atmosphere; and

24. Pressure vessels used for the storage of compressed air not exceeding 1.5 cubic feet (11.22 gallons) in volume with a maximum allowable working pressure of 600 psi or less.
- a. An engineer's license is not required for hot water supply boilers.
 - b. An engineer's license and annual inspection by the department is not required for boilers, steam cookers, steam kettles, steam sterilizers or other steam generators not exceeding 100,000 BTU per hour input, 25 kilowatts and a pressure of 15 psig
 - c. Electric boilers not exceeding a maximum working pressure of 50 psig, maximum of 30 kilowatt input or three horsepower rating shall be inspected as pressure vessels and shall not require an engineer's license to operate.
25. An *Operators License* is required for all boilers, except:
- a. Hot-water supply boilers;
 - b. Steam cookers, kettles, sterilizers, and other steam generators not exceeding 100,000 BTU per hour, 25 kW, 2-1/2 hp, and a pressure of 15 psig;
 - c. Electric boilers not exceeding 50 psig, 30 kW, or 3 hp shall be inspected as pressure vessels.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

First inspection on newly installed boilers must be performed by state inspector.

1. Boilers and steam generators: one annual inspection.
2. Unfired pressure vessels: biennial inspection.
3. Stationary show boilers used for display and demonstration: Biennial inspection.

Note: Refer to last two paragraphs under Insurance Inspection Requirements.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and holding a valid *Certificate of Competency* issued by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of inspection must be filed with the department on National Board forms within 21 days after inspection.
3. Reports of boiler inspections are required annually; reports of pressure vessels are required biennially, see Minnesota Statute 326B.998. (Electric boilers not requiring a licensed engineer shall be inspected as pressure vessels.)
4. The department must be notified of *suspension or cancellation of insurance on account of dangerous conditions* on National Board forms within 30 days.
5. The department must be notified of new business, in duplicate, and *discontinuance of insurance* on National Board forms within 30 days.
6. Items not inspected annually by insurance companies as required by law will be inspected by the jurisdiction. The owner of the boiler or pressure vessel or the insurance company may be charged the cost of the inspection and/or a \$100 penalty.

326B.958 Inspection and Registration

All boiler inspectors shall document the condition of the boiler or pressure vessel. If the boiler or pressure vessel meets the inspection requirements in sections 326B.964 and 326B.966, the inspector shall attach a label or sticker to the boiler or pressure vessel indicating the month and year inspected and the name of the inspection agency. This label is the inspection certificate and shall indicate that the inspected boiler or pressure vessel is found to be safe and suitable for use. The boiler inspector shall directly attach a tag to a newly installed boiler that displays a unique identification number.

If, upon inspecting a boiler or pressure vessel, the boiler inspector determines that the boiler or pressure vessel does not meet the requirements in sections 326B.964 and 326B.966, the inspector shall notify the owner or operator in writing of any defect in the boiler or pressure vessel. The boiler or pressure vessel shall not be operated if the inspector determines that the boiler or pressure vessel is unsafe. The boiler or pressure vessel shall not be operated until these unsafe defects have been corrected and verified by the inspector. If the boiler inspector finds that a boiler is being operated by an unlicensed or improperly licensed person, operation of the boiler shall cease until all operators are properly licensed according to section 326B.978. If circumstances warrant continued operation, the boiler inspector may, at the discretion of the boiler inspector, give approval for continuing operation of the boiler for a

specific period of time, not to exceed 30 days.

STATE FEES

1. Boilers - **\$55.00**

Boilers (over 2,000 square feet of heating surface) for internal inspection shall be billed at the shop inspection fee rate of \$80.00 per hour, plus travel expenses.

2. Pressure vessels - **\$35.00**

3. Shop inspection fees shall be charged per hour plus travel expenses - **\$80.00**

MISCELLANEOUS

1. Insurance company inspectors must hold an approved *National Board Commission*. Copy of the current *National Board Commission* card shall be filed with the division.
2. Examinations for commissions are held on the first Wednesday in March, June, September, and December. Examination fee is \$100.00, which includes state *Certificate of Competency*.
3. *Reciprocal Commissions* are issued for a \$88.00 fee. Biannual renewal is \$88.00, due January 1 of each year. Commission applications are available on the website at www.dli.mn.gov/CCLD/PDF/certofcomp.pdf.
4. Consult state fire marshal for inspection rules covering tanks or cylinders used for storage or transfer of liquefied petroleum gases.
5. *All high-pressure boilers require a licensed operator be in attendance during operation. There is no reciprocity for boiler operator licenses; however, experience will be considered toward an appropriate license.*
6. For information on Boiler Operators Licenses, please visit the department's website at <http://www.dli.mn.gov/CCLD/BoilerLicensing.asp>
7. To obtain a copy of Minnesota's boiler and pressure vessel statutes and rules and for more information on *Boiler Operator's License*, visit the website at www.dli.mn.gov/cclld/boiler.asp.

MISSISSIPPI



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NOTE: Access to Web sites posting jurisdiction laws, rules, and regulations is provided only as a convenience to Synopsis users. The regulatory information therein is beyond the control of the National Board. As such, users of this data should exercise caution when making decisions of a critical nature. The National Board assumes no responsibility for information posted on external Web sites.

STATE DEPARTMENT

William Anderson
Mississippi State Department of Health
Boiler and Pressure Vessel Safety Branch
P.O. Box 1700
Jackson, MS 39215-1700

Telephone — 601.991.6040
Email — william.anderson@msdh.state.ms.us
Fax — 601.956.4098

Express mail only:
805 S. Wheatley St.
Suite 570
Ridgeland, MS 39157

EMPOWERMENT

Mississippi Department of Health Technical Advisory Committee empowered to make, amend, and alter rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1974

Date of latest amendment to law: July 2008.
Date rules and regulations implemented: 1974.
Date of latest rules and regulations: April 1998.
State statute: Mississippi Code, Title 45. Public Safety and Good Order, Chapter 23. *Boiler and Pressure Vessel Safety*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition, Current Addendum), Sections I, IV, VIII (Division 1).
2. Code addenda and case interpretations accepted automatically.
3. ASME CSD-1 (1998 Edition or Newer).
4. Owner/user shall file a copy of the *Manufacturer's Data Report* with the chief inspector (signed by the manufacturer's representative and the authorized inspector prior to operation).
5. Special design or construction requires prior submission to the chief inspector and approval of the *Technical Advisory Committee for Boiler and Pressure Vessel Safety Board as Mississippi Special*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: VR.
2. ASME Code: A, E, H, HLW, HV, M, S, U, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels located on US government property and/or under federal government control; pipelines, including compressors and related facilities which are subject to inspection by an agency of the federal government or other agency of the State of Mississippi.
2. Pressure vessels used for transportation and storage of compressed gases when constructed in compliance with specifications of the US Department of Transportation (and when charged with gas, marked, maintained, and periodically re-qualified for use, as required by appropriate regulations of the US Department of Transportation).
3. Air tanks located on vehicles operating under the rules of other state authorities 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. Pressure vessels that do not exceed:
 - a. 5 cubic feet in volume and 250 psig pressure;
 - b. 1-1/2 cubic feet in volume and 600 psig pressure;
 - c. An inside diameter of 6 inches with no limitation on pressure.
6. Pressure vessels operating at a working pressure not exceeding 15 psig.
7. Vessels with a nominal water-containing capacity of 120 gallons or less for containing water under pressure, including those also containing air, the compression of which serves only as a cushion.
8. Boilers and pressure vessels constructed and operated under licenses and permits granted by the Nuclear Regulatory Commission.
9. Boilers and pressure vessels used in connection with the production, treatment, processing, storage, or transportation of oil or gas, when located in remote areas. The department will determine remote areas on a case-by-case basis.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Heating boilers located in private residences or apartment houses of fewer than six family units.
2. Pressure vessels containing only water under pressure for domestic supply purposes, including those containing air, the compression of which serves only as a cushion, or airlift pumping systems when located in private residences or in apartment houses of fewer than six family units, or those serving rural water systems.
3. Pressure vessels covered under the *Liquefied Compressed Gas Equipment Inspection Law of Mississippi* (Sections 75-57-1 through 75-57-63), *Mississippi Code of 1972*.
4. Air-receiving tanks and attached tanks used in connection with automobile filling stations that do not exceed 15 cubic feet in volume and 250 psig pressure and used primarily to increase pressure in automobile tires.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers shall receive a certificate inspection annually (or as the board may require) and shall receive an annual external inspection while under pressure, if possible.
2. Heating boilers shall receive a certificate inspection biennially.
3. Pressure vessels subject to internal corrosion shall receive a certificate inspection biennially.
4. Pressure vessels not subject to internal corrosion shall receive a certificate inspection at intervals set by the board. But internal inspection shall not be required of pressure vessels, the contents of which are known to be noncorrosive to the material of which the shell, heads, 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, or from evidence that the vessel parts are isolated from the contents with a corrosion resistant lining, provided that such vessels are constructed in accordance with the rules and regulations of the board, and provided further that evidence proving non-corrosiveness is approved by the board.
5. Vessels in nuclear installations other than those licensed by National Regulatory Commission shall be inspected and reported in such form and with such appropriate information as the board shall designate.
6. A grace period of two months beyond the periods specified in paragraphs (a), (b), (c), and (d) of the rules and regulations may elapse between certificate inspections.
7. The board may, at its discretion, permit longer periods between certificate inspections.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by insurance company inspectors commissioned by the board are accepted in lieu of inspections made by a department inspector.
2. Insurance companies shall notify the chief inspector within 30 days of all boilers or pressure vessels on which insurance is written, canceled, or renewed. Insurance companies shall notify the chief inspector immediately if insurance is *refused* or *suspended because of unsafe conditions* and submit a report of the defects. Inspection reports shall be submitted to the chief inspector within 30 days from date of inspection on standard forms for states operating under the ASME Code. When hazardous conditions affecting the safety of a boiler or pressure vessel are found to exist at the time of any inspection, the inspector shall report such conditions immediately to the chief inspector.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for power boilers and 24 months for low-pressure boilers and pressure vessels, is issued by the board upon payment of a fee of \$20.00 for an annual certificate and \$30.00 for a biennial certificate to the *Mississippi State Board of Health, Boiler and Pressure Vessel Safety Fund*.

STATE FEES

Fees are payable to the board by the owner/user upon completion of inspection.

1. Internal inspection:
 - a. Heating surface of 50 square feet or less - **\$12.00**
 - b. Heating surface over 50 square feet and less than 4,000 square feet - **\$25.00**
 - c. Heating surface of 4,000 square feet and less than 10,000 square feet **\$35.00**
 - d. Heating surface of 10,000 square feet or more - **\$40.00**
2. External inspection:
 - a. Heating surface of 50 square feet or less - **\$10.00**
 - b. Heating surface over 50 square feet and less than 4,000 square feet - **\$12.00**
 - c. Heating surface of 4,000 square feet and less than 10,000 square feet - **\$12.00**
 - d. Heating surface of 10,000 square feet or more - **\$12.00**

Not more than the equivalent of the certificate and external inspection fees shall be charged or collected for any and all inspections as above for any boiler in any one year.

3. Low-pressure boilers:
 - a. Heating boiler without manhole - **\$12.00**
 - b. Heating boiler with manhole - **\$25.00**
 - c. Hot-water supply boiler - **\$10.00**

Not more than one fee shall be charged or collected for any and all inspections as above for any heating boiler in any required inspection period.

4. Pressure vessels:
 - a. Cross-sectional area of 50 square feet - **\$10.00**
 - b. Each additional 100 square feet of area - **\$10.00**

A group of pressure vessels, such as the rolls of paper machines or dryers operating as a single machine or unit, shall be considered as one pressure vessel. Not more than one fee shall be charged or collected for any and all inspections as above for any pressure vessel in any required inspection period.

5. Hydrostatic tests, if necessary, shall be charged the same fee scale for certificate inspections at the owner/user's expense.
6. Other inspections, including shop inspections, special inspections, and inspections of secondhand or used boilers or pressure vessels, made by the chief inspector, shall be charged at a rate of not less than \$60.00 for one-half day of four hours and \$100.00 for one full day of eight hours, plus expenses including travel and lodging.

MISCELLANEOUS

1. A processing fee of \$25.00 is required for the issuance of a *Certificate of Competency*.
2. *Reciprocal Commission* is issued to inspectors holding a current *National Board Commission*. Commissions are renewed annually for a fee of \$25.00.
3. Approval to install secondhand equipment must be obtained by the owner/user from the chief inspector.

4. All boilers or pressure vessels subject to law must be stamped with a Mississippi serial number.
5. Copies of the *Boiler and Pressure Vessel Rules and Regulations* may be obtained by contacting the director/chief boiler inspector, or by visiting the [MSDH Web site](#).

MISSOURI



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STATE DEPARTMENT

Greg Carrell, Acting State Fire Marshal

Ronald Joseph Brockman, Deputy Chief
Division of Fire Safety
Boiler and Pressure Vessel Safety Unit
P.O. Box 844
Jefferson City, MO 65102

Telephone — 573.751.8708
Fax — 573.526.5971
Email — joe.brockman@dfs.dps.mo.gov

Express mail only:
205 Jefferson St.
Jefferson City, MO 65102

EMPOWERMENT

Boiler and Pressure Vessel Board empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1944

Date of latest amendment to law: August 2012.
Date rules and regulations implemented: 1986.
Date of latest rules and regulations: February 28, 2010.
State statute: Missouri Revised Statutes, Chapter 650. Department of Public Safety, *Boiler and Pressure Vessel Act*, Sections 200 through 290. Rules of Department of Public Safety, Division 40, Chapter 2, *Boiler and Pressure Vessel Safety Rules*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

The following editions and addendum are currently adopted by state regulation. However, the Missouri Board of Boiler and Pressure Vessels Rules typically votes to adopt the latest edition of the code and issues a general variance for use of the same until state regulations are updated. Currently, the Board has voted to adopt the 2015 ASME BPV Codes, 2015 NBIC and 2012 ASME CSD-1 and issued a general variance for use of the same.

1. ASME Code (2007 Edition, 2008 Addendum), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, and code cases.
2. ASME B31.1 (2007 Edition, 2008 Addendum) up to & including boiler external piping only.
3. ASME CSD-1, 2009 Edition.
4. *National Board Inspection Code* (2007 Edition, 2008 Addendum).
5. National Board registration required for boilers and pressure vessels.
6. API-510 (2001 Edition) may be used on some repairs.
7. ASME PVHO-1 (2007 Edition).
8. ANSI Z21.10.3/CSA 4.3 (2004 Edition).
9. ANSI Z21.56/CSA 4.7 (2006 Edition).
10. Foreign and non-ASME codes: non-ASME codes require variance. English language/US customary unit

details of the proposed construction material specifications and calculations shall be submitted to the chief inspector by the owner/user. Approval as a *State Special* obtained from the board is required before construction is started. Copies of all applicable codes and referenced standards shall be made available, as requested, to the board.

11. NFPA 85 (2007 Edition)
12. NFPA 54 (2009 Edition)
13. NFPA 31 (2006 Edition)

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Boilers and pressure vessels (installed after November 12, 1986), except:

1. Water heaters, pool heaters, and hot-water supply boilers in which none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A nominal water-containing capacity of 120 gallons (provided with one or more ASME-stamped safety relief valves).
2. Hot-water storage tanks less than or equal to 120 gallons.
3. Pressure vessels that have an internal volume of 6" or less.
4. Pressure vessels that are 1 1/2 cu. ft. in volume or less.
5. Pressure vessels that are operated at 15 psig or less.
6. Pressure vessels that do not exceed either 200 psig or 10 cu. ft. in volume.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING. Required safety controls were not grandfathered for installations before November 12, 1986.

INSPECTIONS REQUIRED

1. Power boilers; high-pressure, high-temperature water boilers; waste heat boilers; and unfired steam boilers and thermal fluid heaters:
 - a. An annual certificate inspection which shall be an internal inspection where construction permits;
 - b. An annual external inspection while under normal operating conditions.
2. Low-pressure boilers and pressure vessels: A biennial certificate inspection:
 - a. Steam or vapor boilers shall have an external inspection and an internal inspection biennially where construction permits;
 - b. Hot-water heating and hot-water supply boilers shall have an external inspection biennially and where construction permits, an internal inspection at the discretion of the inspector;
 - c. Pressure vessels shall have an external inspection biennially.

Pressure vessels that are under the supervision of an owner/user inspection agency shall be inspected at the same interval unless otherwise agreed upon by the board and the owner/user inspection agency.

3. Effective January 1, 2007: An installation permit must be obtained from the Division of Fire Safety, Boiler and Pressure Vessel Safety Unit for the installation of all boilers and pressure vessels that fall within the scope of the Boiler and Pressure Vessel Act (mandatory for all installations starting on or after January 1, 2008).

INSURANCE INSPECTION REQUIREMENTS

Inspectors employed by insurance companies and approved owner/user inspection agencies are accepted in lieu of inspections made by the department. Reports shall be made on National Board forms to the chief inspector.

CERTIFICATE OF INSPECTION

The owner/user shall pay a \$20.00 certificate fee for each boiler and pressure vessel inspected.

STATE FEES

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. Internal inspections:
 - i. Boilers of 4,000 pounds per hour capacity or less - **\$35.00**
 - ii. Boilers over 4,000 and up to 16,000 pounds per hour capacity - **\$60.00**
 - iii. Boilers of 16,000 pounds per hour capacity or greater - **Hourly rate**
 - b. External inspections:
 - i. Boilers of 4,000 pounds per hour capacity or less - **\$25.00**
 - ii. Boilers over 4,000 pounds per hour capacity - **\$35.00**
2. Heating boilers and hot-water supply boilers:
 - a. Internal inspections:
 - i. Boilers of 4,000 pounds per hour capacity or less - **\$35.00**
 - ii. Boilers over 4,000 pounds per hour capacity - **\$45.00**
 - b. External inspection less than or equal to 15 psi steam boilers - **\$25.00**
 - c. External inspection of hot-water heaters, jacketed kettles, storage water heaters - **\$18.00**
3. Pressure vessels (fee to be based on the volume in cubic feet):
 - a. 1000 cubic feet or less - **\$16.00**
 - b. Over 1000 cubic feet - **\$25.00**
 - c. Internal inspection requiring entry - **Hourly rate**

Not more than \$120.00 shall be paid for each inspection on any one vessel.
4. Accreditation reviews:
 - a. National Board R Stamp (travel, preparation time, and all expenses) - **\$1,000.00**
 - b. Each hour or part thereof up to eight hours (travel, preparation time, and all expenses) - **\$35.00**
 - c. Each hour or part thereof over eight hours in any one day - **\$50.00**

Per-hour fees do not include mileage and lodging.

MISCELLANEOUS

1. Examinations for *Certificate of Competency* are given on the first Wednesday and Thursday in March, June, September, and December. Examination fee is \$50.00.
2. *Certificate of Competency* is issued through application process to holder of valid *National Board Commission* for a \$50.00 fee. There is a \$25.00 annual renewal fee.
3. Welded repairs and alterations to boilers or pressure vessels shall be performed by an organization holding the National Board "R" stamp. Repair data reports shall be submitted to the jurisdiction for all welded repairs and alterations.
4. A boiler operator's license is not required in the state, but is required for the city of St. Joseph.
5. A copy of the boiler and pressure vessel rules and regulations may be obtained by writing the Boiler and Pressure Vessel Unit. Cost: \$5.00.
6. Mechanically assembled boiler external piping need not be done by a "PP," "S," or "A" stamp holder. All other requirements must be met.

MONTANA



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STATE DEPARTMENT

Pam Bucy, Commissioner
Department of Labor and Industry

Building Codes Bureau
301 South Park Avenue
P.O. Box 200517
Helena, MT 59620-0517

Telephone — 406.841.2056
Email — bsdbcb@mt.gov
Fax — 406.841.2050

EMPOWERMENT

The Building Codes Bureau, by administrative rule, empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1895

Date of latest amendment to law: April 2005.
Date rules and regulations implemented: 1895.
Date of latest rules and regulations: February 2006.
State statute: Montana Code 2001, Title 50. Health and Safety, Chapter 60. *Building Construction Standards* and Chapter 74. *Boiler and Steam Engines*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition), Sections I, II, IV, V, VI, VII, IX
2. ASME CSD-1 (2002 Edition).
3. Special design or construction requires approval of the bureau.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HV, S.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except those under federal control.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

All boilers, except the following:

1. Boilers under federal control.
2. Steam-heating boilers operated at not over 15 psig in private residences or apartments of six or fewer families.

3. Hot-water heating or supply boilers operated at not over 50 psig and temperatures not over 250°F when in private residences, or apartments of six or fewer families.

INSPECTIONS REQUIRED

Boilers exempted under OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION are not required to be inspected.

1. All manually-fired boilers and all boilers and banks of boilers rated with a total input of 400,000 BTU per hour or greater: annual inspection.
2. All automatically fired boilers rated with an input of less than 400,000 BTU per hour: biennial inspection.
3. Steam heating and power boilers: annual internal inspection. This inspection may be performed during a scheduled maintenance shutdown with prior approval from the department.

If located in a school, day-care center, hospital, rest home, retirement center, or place of assembly with a capacity of more than 100 persons: an annual inspection is required.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies may be accepted in lieu of inspections made by bureau inspectors as equivalent to those of the state inspectors. Whenever the department inspection confirms that the insurance company inspection report is substantially and materially incomplete, invalid, or unacceptable, the department may assess the insurance company the fee for a special inspection as imposed by ARM 24.301.714.
2. Each such special inspector shall hold a certificate as boiler inspector issued by the National Board of Boiler and Pressure Vessel Inspectors.

CERTIFICATE OF INSPECTION

1. An *Operating Certificate* is issued by the bureau for the operating period until the next required inspection, unless cause is found for revocation.
2. Boilers may not be operated without a certificate.

STATE FEES

1. Internal inspection - **\$75.00**
2. External inspection:
 - a. Hot-water heating and supply - **\$35.00**
 - b. Steam-heating - **\$50.00**
 - c. Power boilers - **\$70.00**
3. Special inspection (per hour plus expenses) - **\$50.00**
4. *Operating Certificate* - **\$31.00**

MISCELLANEOUS

1. Operators of boilers are required to be licensed by the division. Licenses are issued in four different categories depending on operating pressure.
2. Boilers must have a state serial number applied by the state of Montana Boiler Inspectors.
3. A copy of the *Montana Boiler Code* may be obtained by contacting:

Building Codes Bureau/Boiler Safety Section
P.O. Box 200517
Helena, MT 59620-0517
406.841.2056
Cost: free.

NEBRASKA



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STATE DEPARTMENT

Christopher B. Cantrell, Boiler Inspection Program Manager
Department of Labor
Office of Safety
Boiler Inspection Program
P.O. Box 94600
Lincoln, NE 68509-4600

Telephone — 402.471.4721
Email — christopher.cantrell@nebraska.gov
Fax — 402.471.5039

Express mail only:
550 S. 16th Street
Lincoln, NE 68508

EMPOWERMENT

Commissioner of Labor empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1943

Date of latest amendment to law: May 2009.
Date rules and regulations implemented: 1943.
Date of latest rules and regulations: May 2010.
State statute: Nebraska Revised Statutes, Title 48. Labor, *Boiler Inspection Act*, Chapters 48-719 through 48-743;
Nebraska Administrative Code, Title 229. Chapters 1 through 28.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X
2. Code cases are accepted on a case-by-case basis with written approval from the chief boiler inspector.
3. ASME CSD-1 (2012 Edition).
4. ASME B31.1 (2013 Edition).
5. Installer must file a copy of *Manufacturer's Data Report* with the department upon installation.
6. *National Board Inspection Code* (2013 Edition).
7. National Board registration required for boilers and pressure vessels.
8. API-510 (most recent prior to July 1, 2013).
9. NFPA Codes (most recent prior to July 1, 2013).
10. Special design or construction requires approval by the department.

Stamping:

Where appropriate, the following National Board stamps or ASME Certification Mark designators are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, S, U, U2, U3, V.

Boilers and pressure vessels must be inspected and stamped in accordance with the requirements of the Boiler Inspection Act. All boilers and pressure vessels subject to inspection shall be assigned a Nebraska serial number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

The *Nebraska Boiler Inspection Act* does not apply to:

1. Boilers under federal jurisdiction and control.
2. Boilers of railway locomotives subject to federal inspection.
3. Boilers operated and regularly inspected by railway companies operating in interstate commerce.
4. Boilers used exclusively for agricultural purposes.
5. Steam-heating boilers in single family residences and apartment houses with four or fewer units, using a pressure of less than 15 psi and having a safety valve set at not higher than 15 psi.
6. Heating boilers using water in single family residences and apartment houses with four or fewer units, using a pressure of less than 30 psi and having a safety valve set at not higher than 30 psi.
7. Fire engine boilers brought into the state for temporary use in times of emergency.
8. Boilers of a miniature model locomotive, boat, tractor, or stationary engine constructed and maintained as a hobby, not for commercial use, having an inside diameter of less than 10 inches and a grate area not in excess of 1-1/2 square feet, and properly equipped with a safety valve.
9. Hot-water supply boilers if none of the following limitations is exceeded:
 - a. 200,000 BTU per hour of input;
 - b. 120 gallons of nominal capacity; or
 - c. 210°F output.
10. Unfired pressure vessels not exceeding:
 - a. 5 cubic feet in volume; or
 - b. A pressure of 250 psi.
11. Unfired pressure vessels owned and maintained by a district or corporation organized under the provisions of Chapter 70, Article 6.
12. Unfired pressure vessels:
 - a. Not exceeding a maximum allowable working pressure of 500 psi,
 - b. That contain carbon dioxide, helium, oxygen, nitrogen, argon, hydrofluorocarbon refrigerant, or any other nonflammable gas determined by the commissioner not to be a risk to the public,
 - c. That are manufactured and repaired in accordance with applicable ASME standards, and
 - d. That are installed in accordance with the manufacturer's specifications.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. All jurisdictional boilers, except hobby boilers, steam farm traction engines, portable and stationary show engines, and portable and stationary show boilers, shall receive an annual certificate inspection. Hobby boilers, steam farm traction engines, portable and stationary show engines, and stationary and portable show boilers shall be inspected externally biennially and internally quadrennially.
2. Power boilers and high-pressure, high-temperature water boilers shall receive an internal inspection annually where construction permits and an external inspection while in operation, if possible; otherwise it shall be as complete an inspection as possible.
3. Under certain conditions — with the chief boiler inspector's approval — power boilers, waste-heat boilers, and high-pressure, high-temperature water boilers having internal continuous water treatment may be subject to an annual external inspection while in operation and an internal inspection biennially.
4. Low-pressure boilers shall be inspected as follows:
 - a. Steam or vapor boilers shall receive an external inspection annually and an internal inspection biennially where construction permits. Under certain conditions with the chief inspector's approval, steam or vapor boilers which have internal continuous water treatment may be subject to an annual external inspection while in operation and an internal inspection quadrennially;

- b. Pool heaters, spa heaters, hot water heating boilers and hot water supply boilers shall receive an external inspection annually, and, where construction permits, an internal inspection every four years from the date of manufacturer's completion.
- c. Effective August 30, 2009, all newly installed water heaters stamped with the ASME "HLW" Code symbol stamp shall be inspected externally at least every 24 months and, where construction permits, these units shall receive an internal inspection at the inspector's discretion but not to exceed every six (6) years from the date of manufacturer's completion.
- d. All water heaters installed prior to August 30, 2009, shall be inspected externally annually and, where construction permits, internally every five years from the date of manufacturer's completion. These existing water heaters may be placed on the inspection frequency noted in (4.c) above upon written request by the Commissioned Inspector responsible for the inservice inspection of the item. This request shall be made on the Inspection Report submitted for renewal of the Certificate of Inspection for the object.

5. Pressure vessels:

- a. Unless excepted, pressure vessels subject to internal corrosion shall be inspected internally and externally biennially;
- b. Unless excepted, pressure vessels not subject to corrosion shall receive an external inspection biennially;
- c. Unless excepted, pressure vessels subject to internal corrosion or which contain hazardous or lethal fluids shall receive an internal inspection biennially where construction permits. Pressure vessels not subject to internal corrosion shall be inspected internally, where construction permits, quinquennially (every five years);
- d. Pressure vessels under the supervision of an owner/user inspection organization shall be inspected at intervals required by the *Nebraska Administrative Code* and the *National Board Inspection Code*, or API-510, as applicable.

INSURANCE INSPECTION REQUIREMENTS

- 1. Inspections made by Special Inspectors employed by Authorized Inspection Agencies are accepted in lieu of inspections made by a department inspector.
- 2. Reports of external and/or internal inspections must be filed with the department on state-approved forms within 14 days after inspection.
- 3. The department must be notified immediately of *suspension of insurance or inspection contract on account of a dangerous condition*.
- 4. The department must be notified of *new business and discontinuance of insurance within 30 days of such action*.
- 5. Insurance companies and Authorized Inspection Agencies are required to inspect to the degree required by the *Boiler Inspection Act*.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for boilers and 24 months for water heaters and pressure vessels, are issued by the department upon payment of the required fees by the owner/user. The Certificate of Inspection fees for boilers and water heaters are \$3.00/month, and for pressure vessels \$1.50 per month.

STATE FEES

Boilers, high-temperature water boilers, low-pressure steam boilers, hot-water heating and supply boilers, and hot-water heaters:

- 1. Internal certificate inspections:
 - a. Boilers of 800,000 BTU per hour rated capacity or less - **\$25.00**
 - b. Boilers over 800,000 BTU per hour rated capacity and less than 1,600,000 BTU per hour rated capacity - **\$45.00**
 - c. Boilers of 1,600,000 BTU per hour rated capacity or more, and less than 3,200,000 BTU per hour rated capacity - **\$90.00**
 - d. Boilers of 3,200,000 BTU per hour rated capacity or more, and less than 8,000,000 BTU per hour rated capacity - **\$130.00**
 - e. Boilers of 8,000,000 BTU per hour rated capacity or more - **\$170.00**
- 2. External inspections:
 - a. Boilers of 800,000 BTU per hour rated capacity or less - **\$25.00**

- b. Boilers over 800,000 BTU per hour rated capacity - **\$45.00**
 - c. Boilers of 1,600,000 BTU per hour rated capacity or more, and less than 3,200,000 BTU per hour rated capacity - **\$45.00**
 - d. Boilers of 3,200,000 BTU per hour rated capacity or more, and less than 8,000,000 BTU per hour rated capacity - **\$65.00**
 - e. Boilers of 8,000,000 BTU per hour rated capacity or more - **\$85.00**
3. All other inspections, including shop inspections, special inspections, inspections of secondhand or used boilers or pressure vessels for the purpose of determining usability, or special trip by the chief or deputy boiler inspector to witness the application of a pressure test, shall be charged at the rate of \$200.00 for one-half day of four hours or any portion thereof, or \$400.00 for one full day at four to eight hours.
4. Fees for pressure vessel inspections by the chief boiler inspector or his/her deputy shall be based on the maximum length of the vessel times the maximum width or diameter thereof in feet. (Example: L x W = 10 feet x 6 feet = 60 square feet = \$25.00.) Formula taken from NB-132, *Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations*.
5. Certificate inspections – internal or external:
- a. Each pressure vessel subject to inspection having a product, as previously determined, of 50 square feet or less, shall be charged at \$25.00 per vessel;
 - b. For each additional 100 square feet, or portions thereof, of an area in excess of 50 square feet shall be charged an additional \$10.00 per 100 square feet or portion thereof;
 - c. Not more than \$55.00 shall be paid for each inspection on any one vessel. A group of pressure vessels, such as the rolls of a paper machine or dryers operating as a single machine or unit, shall be considered as one pressure vessel. Not more than one fee shall be charged or collected for any pressure vessel inspected during a required inspection period.

MISCELLANEOUS

1. Insurance company and Authorized Inspection Agency special inspectors must hold a current and valid *National Board Commission* and a *Nebraska Reciprocal Commission* in order to perform inservice inspections, repair and alteration inspections, and to perform shop inspections.
2. A *Nebraska Reciprocal Commission* will be issued to special inspectors holding a current and valid *National Board Commission* upon application to the chief inspector accompanied by a photostatic copy of the applicant's *National Board Commission*, and remittance of a \$20.00 fee.
3. Upon written request to the chief boiler inspector, the *National Board Commission* examination will be given on the first Wednesday in March, June, September, and December.
4. Renewal of a *Nebraska Reciprocal Commission* is required by December 31 of each year. Fee for new commission or renewal is \$20.00. A photostatic copy of the applicant's current and valid *National Board Commission* is required.
5. A boiler operator's license is not required by state statutes but the *City of Omaha Mechanical Code* does require certain licenses for boiler operators.
6. Contact the jurisdiction for a copy of the Nebraska Boiler Inspection Act, or go to www.dol.nebraska.gov.
7. All newly installed jurisdictional objects shall be inspected by the Chief Boiler Inspector or a Deputy Chief Boiler Inspector prior to a Certificate of Inspection being issued. A ten day advance notice of installation must be filed with the Department. This form may be filled out and submitted online at www.dol.nebraska.gov.

NEVADA



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STATE DEPARTMENT

David Sandfoss, Safety Supervisor
Mechanical Compliance Section
Department of Business & Industry
Division of Industrial Relations
4600 Kietzke Lane, Suite 151
Reno, NV 89502

Telephone — 775.688.3756
Fax — 775.688.1664
Email — sanfoss@business.nv.gov

EMPOWERMENT

Department of Business and Industry empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1956

Mechanical Compliance Section:

Date of latest amendment to law: December 2008.
Date rules and regulations implemented: 1956.
Date of latest rules and regulations: December 2004.
State Statute: Nevada Administrative Code, Title 455C. Safety and Health.

Mine Section:

Date of latest amendment to law: October 1982.
Date rules and regulations implemented: 1909.
Date of latest rules and regulations: January 2000.
State statute: Code of Federal Regulations, Parts 56 and 57 and Nevada Administrative Code, Title 455C. Safety and Health, Chapter 512. *Safety of Mines*, Sections 510 through 594.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X
2. ASME CSD-1 (2012 Edition).
3. ASME B31.1 (2012 Edition).
4. Installers must file a copy of *Manufacturer's Data Report* with the Mechanical Compliance Section or Mine Section.
5. *National Board Inspection Code* (2013 Edition).
6. National Board registration required for boilers and pressure vessels.
7. Foreign codes: special design or construction requires approval of the division and must be registered with the National Board.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: A, E, H, HLW, HV, M, NV, PP, S, U, U2, UM, UV, V.

All boilers and pressure vessels must be inspected prior to use. Boilers and pressure vessels under Mechanical Compliance Section jurisdiction must also be registered prior to use.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

1. All boilers within the scope of Section I of the ASME Code.
2. All low-pressure boilers and lined water heaters within the scope of Section IV of the ASME Code.
3. All pressure vessels within the scope of Section VIII of the ASME Code, except the following:
 - a. Pressure vessels that meet the requirements of US Department of Transportation for the shipment of liquids or gases under pressure;
 - b. Air tanks, integral to brake systems, located on vehicles operating under the rules of other state authorities and used for carrying passengers or freight, or used for storage of compressed air only.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Mechanical Compliance Section jurisdiction, same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Boilers and pressure vessels under federal control.
2. Pressure vessels operating under the laws of other states.
3. Unfired pressure vessels having an inside diameter not exceeding 6 inches.
4. Unfired pressure vessels containing cold water under pressure, including those containing air, the compression of which serves only as a cushion.
5. Hot-water supply boilers which are directly fired with oil, gas, or electricity, or pressure vessels containing water heated by steam or by any other means, if none of the following limitations is exceeded:
 - a. A heat input of 199,999 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A water capacity of 120 gallons.
6. Unfired pressure vessels not exceeding 5 cubic feet in volume and 15 psig.
7. An unfired pressure vessel which may be classified as a pressure container (an integral part or component of a rotating or reciprocating mechanical device such as a pump, compressor, turbine, generator, engine, or hydraulic or pneumatic cylinder in which the primary design considerations and/or stresses are derived from the functional requirements of the device).
8. Unfired pressure vessels used for the storage of compressed air only.
9. A hot-water heater constructed of continuous coil, used only to produce steam vapor to clean things such as machinery, equipment and buildings, if:
 - a. Tubing or pipe size does not exceed 3/4-inch in diameter (drums and headers not attached);
 - b. Nominal water-containing capacity does not exceed 6 gallons;
 - c. Water temperatures do not exceed 350°F;
 - d. Steam is not generated within the coil.
10. Pressure vessels and piping containing liquid petroleum gas and liquid natural gas.
11. A boiler or heater for a pool, if:
 - a. The supply or return line has no stop valve installed;
 - b. It is impossible for the unit to build pressure in excess of 15 psig.
12. Boilers and pressure vessels installed in a single family residence unless the boiler or pressure vessel is a:
 - a. Hot water supply boiler;
 - b. Hot water supply tank that has a storage capacity which exceeds 120 gallons;
 - c. Low pressure heating boiler;
 - d. Power boiler;
 - e. Pressure vessel that:
 - i. Operates at pressures that exceed 15 psig;
 - ii. Has a storage capacity of five cubic feet or more by volume.

Mine Section jurisdiction: Same as Mechanical Unit's OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING and inservice inspection, except for Items 7 and 8; air receivers inspected as defined.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. One annual internal inspection;
 - b. One annual external inspection at approximately a six-month interval from the internal inspection.
2. Low-pressure steam heating boilers: one annual external inspection. Where design and construction permit, an internal inspection shall be conducted biennially.
3. Hot-water heating boilers and hot-water supply boilers: one internal inspection biennially if design and construction permit and inspector/special inspector requests it or external including operational testing of all controls and safety devices.
4. Lined potable water heaters: one external inspection including operational testing of all controls and safety devices.
5. Pressure vessels:
 - a. Mechanical Compliance Section jurisdiction: One external inspection quadrennially; internal if design and construction permit;
 - b. Mine Section jurisdiction: One external inspection triennially; internal if design and construction permit.

Industries having maintenance and examination programs approved by the department and under Mechanical Compliance Section jurisdiction may have internal inspection interval extended to a maximum of 24 months, provided external inspections are made every six months.

INSURANCE INSPECTION REQUIREMENTS

1. An inspection made by an inspector (employed by an inspection entity), holding a *Certificate of Competency* received from the division, is accepted in lieu of an inspection made by a Jurisdictional inspector.
2. All insurance companies shall immediately notify and submit a report of defects to the appropriate jurisdiction (Mechanical Compliance Section or Mine Section), regarding any unsafe boiler or pressure vessel they refuse to insure.
3. Notification to the appropriate jurisdiction (Mechanical Compliance Section or Mine Section) shall be made within 30 days of all boiler or pressure vessel insurance that is *written, canceled, not renewed, or suspended*.
4. Reports of internal and external inspections must be filed with the mine operator on National Board forms within 10 days of inspection.
5. Extension of inspection intervals may be granted upon approval of a written request submitted to the Mine Safety and Training Section or to the Mechanical Compliance Section.

CERTIFICATE OF INSPECTION

1. Mechanical Compliance Section:
 - a. An *Operating Permit* is issued by the department, valid until expiration, unless a condition affecting the safety of the boiler or pressure vessel is disclosed;
 - b. An *Operating Permit* issued for an insured boiler or pressure vessel shall be rendered void after the unit for which it was issued ceases to be insured by a duly authorized insurance company.
2. Mine Section:
 - a. A *Certificate of Inspection* issued by the insurance company for insured boilers and pressure vessels shall be filed with the mine operator and readily available for examination;
 - b. No *Certificate of Inspection* issued for an insured boiler or pressure vessel shall be valid after the certificate expiration date if the boiler or pressure vessel for which it was issued ceases to be insured by a duly authorized insurance company.

STATE FEES

Fees for inspection and services provided by the Mechanical Compliance Section are required.

MISCELLANEOUS

1. The *National Board Inspection Code* has been incorporated within these regulations.
2. Inspectors shall hold a valid Nevada *Certificate of Competency* obtained from the Mechanical Compliance

Section.

3. If a repair or alteration to a boiler or pressure vessel is necessary, the "R" certificate holder shall submit to the Mechanical Compliance Section or Mine Section a controlled copy of the holder's repair manual for acceptance prior to commencement of repair. The "R" certificate holder shall submit to the chief boiler inspector of the Mechanical Compliance Section or jurisdictional authority of the Mine Section the appropriate "R" form prescribed by the National Board within 30 days after completion of the repair or alteration, depending on the Nevada jurisdiction involved.
4. A *Reciprocal Commission* may be issued, with a processing charge, to insurance inspectors holding a *National Board Commission*.
5. Examinations for the initial issuance of boiler inspector *Certificates of Competency* are administered.
6. Commissions are renewable annually. A photostatic copy of the inspector's current National Board credential card is required.
7. Repair organizations shall hold an applicable ASME Code authorization or National Board authorization and they must be authorized by the division before engaging in repairs.
8. One copy of the boiler and pressure vessel regulations may be obtained at no cost by contacting the Mechanical Compliance Section or Mine Section.

NEW BRUNSWICK



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PROVINCIAL DEPARTMENT

Eben L. Creaser, Chief Boiler Inspector
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Technical Inspection Services
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Canada

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EMPOWERMENT

Government empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1937

Date of latest amendment to law: May 5, 2007.
Date rules and regulations implemented: 1937.
Date of latest rules and regulations: October 1984.
Provincial statute: New Brunswick Regulations. *Boiler and Pressure Vessel Act 2011*, Chapter 122, Regulations 84-174, April 21, 2008; 84-175, September 20, 2003; 84-176, September 30, 2003; and 84-177, April 21, 2008.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (Current edition), B52 (Current edition), Z305.1 (Current edition).
2. CGA B149.1, B49.2, Z305.1, B105.
3. ASME Code (Current Edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI.
4. ASME Code addenda and code case acceptance by express written permission.
5. ASME CSD-1 (Current Edition).
6. ASME B31.1 (Current Edition), B31.3 (2002 Edition), B31.5 (2000 Edition).
7. ASME data sheet and stamping shall display the CRN.
8. ASME PVHO-1 (Current Edition).
9. *National Board Inspection Code* (Current Edition, Current Addendum).
10. National Board registration required for any vessel brought in from any country outside of Canada.
11. Manufacturers must register with department and submit designs and specifications for approval before installation. (An appropriate fee ranging from \$50.00 to \$300.00 CAD applies.)
12. Special design or construction requires approval of the chief inspector.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R (accepted), VR.
2. ASME Code: H, HLW, N, NV, PP, S, U.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels operated under supervision of the Board of Transport Commissioners for Canada.
2. Boilers and pressure vessels subject to inspection under *Canada Shipping Act*.
3. Boilers used solely for heating, and pressure vessels in a building occupied for residential purposes by not more than four families.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Boilers having a capacity of 3 cubic feet or less.
2. Pressure vessels having a diameter less than 6 inches, a capacity less than 1-1/2 cubic feet, and pressure less than 15 psi.
3. Pressure vessels with a pressure less than 15 psi.

INSPECTIONS REQUIRED

1. Annual inspection of plant is required, with frequency of inspection scheduled according to type, size, and location of each boiler and pressure vessel.
2. No person shall use a boiler or pressure vessel unless it is inspected by a boiler inspector. Such person shall be in possession of a valid certificate signed by the chief inspector (certifying inspection and approved suitability for use).
3. A boiler inspector as defined in the *Boiler and Pressure Vessel Safety Act* is an inspector employed by the Department of Public Safety.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted unless approved by the chief boiler inspector.

PROVINCIAL FEES

1. For annual registration of plant:
Number of boilers and pressure vessels multiplied by - **\$25.00 CAD**
2. For initial inspection (per hour or any part thereof):
Boiler, pressure vessel or pressure piping system - **\$100.00 CAD**
3. Overtime (per hour) - **\$150.00 CAD**
4. For special inspection (per hour or any part thereof):
Boiler, pressure vessel or pressure piping system - **\$100.00 CAD**

Fee for Certificate of Competency is \$50.00 CAD. Contact the department for information concerning this certificate and for information on fees for Stationary Engineers Examinations and Licenses.

MISCELLANEOUS

1. Every boiler inspector under the act shall:
 - a. Have five years' experience in a heating plant or power plant of more than 700 therm hour and hold a valid *First Class Stationary Engineers License*, issued under this act;
 - b. Pass the boiler inspectors' examination, as prescribed by the chief inspector, and have at least five years' experience in designing, constructing, installing, or operating heating plants or power plants of more than 700 therm hour.

Any candidate having met one of the above requirements set forth in Section 20 may, upon application therefor and upon payment of the prescribed fee, be issued a boiler inspector's Certificate of Competency.

2. Every boiler inspector's *Certificate of Competency* shall expire on the thirty-first day of December of the year for which it was issued. It may, at the discretion of the chief inspector (upon application by the holder and payment of the prescribed fee), be renewed from year to year.
3. A permit is required for new installations.
4. Operators of boilers are required to be licensed for low-pressure heating plants having a rating of more than 50 therm hour and high-pressure plants having a rating of more than 20 therm hour.

NEW HAMPSHIRE



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STATE DEPARTMENT

James W. Craig, Commissioner

Darrell E. Mallory, Chief Boiler Inspector
New Hampshire Department of Labor
State Office Park South
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Concord, NH 03301-2076

Telephone — 603.271.7599
Email — Darrell.Mallory@DOL.NH.gov
Fax — 603.271.2668

Express mail only:
95 Pleasant Street, Suite C
Concord, NH 03301-3852

EMPOWERMENT

Commissioner of Labor empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1968

Date of latest amendment to law: 17 September 2014.
Date rules and regulations implemented: 1 January 1968.
Date of latest rules and regulations: 27 April/ 2016
State statute: New Hampshire Revised Statutes, Annotated and Administrative Rules, New Hampshire Department of Labor, Title 12. Public Safety and Welfare, Chapter 157-A. *Boilers and Pressure Vessels*, Sections A1 through A14.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2015 edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI.
2. ASME B31.1 (2012) for pressure piping connected to the boiler or pressure vessel. For low-pressure boilers, the metallic piping material allowed by B31.9 shall be acceptable. State inspection is required.
3. *Manufacturer's Data Report* must be filed with the commissioner on ASME forms before a new power boiler or high-pressure, high-temperature water boiler or pressure vessel may be installed in the state. If used equipment is installed, a similar report shall be filed with the commissioner by the owner/user.
4. *National Board Inspection Code* (2015 edition). .
5. National Board registration required for boilers and pressure vessels.
6. Special design or construction requires approval of the labor commissioner.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamp and designator are required:

1. National Board: NR, R, VR.
2. ASME Code: A, H, N, NA, NRT, PP, S, U, UV, M, E

All boilers and unfired pressure vessels shall be tagged with a New Hampshire serial number on a metal tag obtained from the department.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Whenever ASME mandates, all boilers and pressure vessels under the ASME Code, except:

1. Boilers and pressure vessels under federal control.
2. Manually-fired boilers for model locomotive, boat, tractor, stationary engine, or antique motor vehicles constructed and maintained only as a hobby for exhibition or educational purposes (not for commercial use), provided such boilers have an inside diameter less than 12 inches or a grate area of 2 square feet or less and are equipped with an ASME-stamped safety valve of adequate capacity and size, a water level indicator, and a pressure gage.
3. Pressure vessels used for transportation and storage of compressed gases when constructed and used in compliance with ICC specifications and regulations.
4. Air tanks located on vehicles operating under the rules of state authorities and used for carrying passengers or freight.
5. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
6. Pressure vessels that do not exceed:
 - a. 5 cubic feet in volume or 250 psig;
 - b. 1-1/2 cubic feet in volume; or
 - c. An inside diameter of 6 inches and 3,000 psig.
7. Pressure vessels operating at a working pressure not exceeding 15 psig.
8. Water-containing vessels (excluding hot-water heaters) having a working pressure not exceeding 125 psig, including those with air, the compression of which serves only as a cushion.
9. Tanks containing air and liquids in which pressure is maintained by pumps.
10. Group I refrigerant receivers (American Society of Heating, Refrigerating and Air Conditioning Engineers).
11. Hot-water heaters installed after the effective date of this act, provided that none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Properties used exclusively as private residences or apartment houses of fewer than three family units.
2. Properties used exclusively as private residences or apartment houses with three or more family units with an output of less than 200,000 BTU per hour.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers:
 - a. One annual certificate inspection;
 - b. One annual external inspection while under pressure, if possible.
2. Low-pressure steam or vapor heating boilers, hot-water heating and hot-water supply boilers: one biennial certificate inspection, with an internal inspection at least once quadrennially where construction permits.
3. Pressure vessels: one biennial certificate inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. A copy of the certificate inspection report must be filed with the commissioner within ten days after inspection.
3. The department should be notified within 30 days of *suspension of insurance on account of dangerous conditions*.
4. The department should be notified immediately of *insurance discontinued or refused on account of dangerous conditions*.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for not more than two months beyond the due date of the next certificate inspection, is issued by the department. A fee of \$50.00 shall be charged for each certificate.
2. Upon written approval of a written request by the owner/user with the inspector's concurrence, a longer period between certificate inspections may be given by the state.

STATE FEES

A total of \$100.00 per hour of actual time at location, plus \$50.00 certificate fee.

MISCELLANEOUS

1. A license shall be issued by the commissioner to an inspector for the first-year period upon payment of a fee of \$30.00. The license may be renewed every year upon payment of a fee of \$20.00 and copy of current National Board commission card.
2. All secondhand boilers or pressure vessels must be inspected by an inspector holding a *National Board Commission*. Data submitted by the inspector shall be filed by the owner with the commissioner for the commissioner's approval.
3. Boilers or unfired pressure vessels that do not conform to the ASME Code may be operated as a hobby or for educational or historical purposes only (provided an inspection, in accordance with the rules of the commissioner, is made annually).
4. Lap-seam boilers under this section are limited to 100 psig. Such boilers or unfired pressure vessels normally located outside this jurisdiction may — upon application to the commission — be permitted to operate for a period not exceeding seven days, provided the object has an operating certificate from the state in which it is normally operated.
5. An operator's license is not required to operate a boiler or pressure vessel.
6. A copy of the law may be obtained from the Web site at www.nh.gov or by mail at:

Chief Boiler Inspector
P.O. Box 2076
Concord, NH 03302-2076

Cost: free.

NEW JERSEY



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STATE DEPARTMENT

Milton Washington, Chief Inspector
Mechanical Inspection Bureau of Boiler and Pressure Vessel Compliance
Department of Labor and Workforce Development
Labor Standards and Safety Enforcement
Division of Public and Occupational Safety & Health
P.O. Box 392
Trenton, NJ 08625-0392

Telephone — 609.292.2345
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Website: http://lwd.dol.state.nj.us/labor/lisse/safetyhealth_index.html

Express mail only:
1 John Fitch Plaza, 3rd Floor
Trenton, NJ 08625-0392

EMPOWERMENT

Board of Boiler, Pressure Vessel and Refrigeration Rules shall promulgate rules and regulations after a public hearing.

Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1917

Date of latest amendment to law: December 7 2015.
Date rules and regulations implemented: 1917.
Expiration date of latest rules and regulations: October 1, 2017.
State statute: New Jersey State Statutes, Title 34. Labor and Workers Compensation, *Boilers and Pressure Vessels*, New Jersey Administrative Code, 12:90.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2015 Edition, All Addenda), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
2. A Code of Construction which is a national or internal standard and is recognized by regulation and by the country of origin, when applicable, shall be acceptable as an alternate Code of Construction provided it has been completely approved and accepted as an alternative Code of Construction by The National Board of Boiler and Pressure Vessel Inspectors.
3. Code addenda and case interpretations accepted unless specific exceptions are taken. Code rules updated every three years.
4. *National Board Inspection Code* (2013 Edition).
5. National Board registration is required for all pressure vessels.
6. Class I pressure vessels must be constructed in accordance with pertinent sections of *ASME Boiler and Pressure Vessel Code* valid at the time of construction. These vessels shall be stamped and identified as prescribed by the ASME Code. Vessels under this category shall be stamped and registered with the National Board.
7. Class II pressure vessels are existing installations, constructed prior to January 1, 1957, in accordance with API-ASME joint code and registered with the state prior to January 1, 1957.
8. Class III pressure vessels are those identified as New Jersey-approved.

9. Class IV pressure vessels may be constructed in accordance with the user/inspector provision of the ASME Code and must be shop-inspected by a user/inspector who is approved by and registered with the department.
10. New Jersey-approved vessels require non-code design review fees of \$3,000.00 each. Additional fees shall be required for designs submitted for a single project and shall apply to each user application of the design.
11. Liquid petroleum gas installations are covered under a separate law. Tanks must be constructed in accordance with Section VIII of the *ASME Boiler and Pressure Vessel Code*, shop-inspected, tested, and stamped by an inspector holding a *National Board Commission* and employed by an authorized inspection agency.

Stamping:

1. Repairs and alterations: As required by the National Board and New Jersey Administrative Code (NJAC 12:90).
2. New construction: ASME Code and New Jersey Administrative Code or equivalent code accepted by The National Board of Boiler and Pressure Vessel Inspectors.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Those under federal inspection and control.
2. Steam or hot-water boilers having less than 10 square feet of heating surface.
3. Steam or hot-water boilers having a heat input of less than 10 kW or 40,000 BTU per hour.
4. Steam boilers when constructed for a pressure not exceeding:
 - a. 15 psi steam when serving dwellings of fewer than six family units or accommodation of less than 25 persons;
 - b. 160 psi and 250°F hot water when serving dwellings of fewer than six family units or accommodating less than 25 persons.
5. Unfired pressure vessels in which steam is not generated may be exempted from shop inspections by qualified inspectors provided they comply with ASME Code construction, are of simple single-wall construction, and are stamped with the ASME "UM" Code symbol, or a stamp specified by the bureau:
 - a. 5 cubic feet in volume and 250 psi design pressure;
 - b. 1-1/2 cubic feet in volume and 600 psi design pressure.
6. Those having a nominal capacity of 120 gallons or less, used for containing water under pressure, including those containing air, the compression of which serves only as a cushion.
7. Those serving as a hot-water storage tank, heated by steam or any other indirect means, when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 200°F;
 - c. A nominal water-containing capacity of 120 gallons.
8. Those having an internal or external operating pressure not exceeding 15 psi, with no limitation on size.
9. Those having an inside diameter of 6 inches or less, with no limitation on pressure.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Refrigeration systems using flammable or toxic refrigerants with 3 tons refrigerating capacity or less requiring 6 driving hp or less.
 - a. Flammables are those classified in ASHRAE 34 as A2, B2, A3, or B3.
 - b. Toxic refrigerants are those classified in ASHRAE 34 as B1, B2, or B3.
 - c. Nonflammables are those classified in ASHRAE 34 as A1 or B1.
 - d. Nontoxic are those classified in ASHRAE 34 as A1, A2, or A3.
2. Refrigeration systems using nonflammable and nontoxic refrigerant with 18 tons refrigerating capacity or less or requiring 36 driving hp or less, operating at a pressure of 15 psig or less.
3. Excluded from inspection is equipment used solely for the propulsion of motor vehicles under the Motor Vehicles Act, Title 39.

INSPECTIONS REQUIRED

1. Boilers:
 - a. An annual internal and external inspection for steam boilers;
 - b. An annual external inspection and biennial internal inspection for hot-water boilers.
2. Pressure Vessels - Each pressure vessel, except for "UM" stamped pressure vessels, shall be subject to either initial in-service inspection (for a newly manufactured pressure vessel) or initial field certificate inspection (for an existing pressure vessel).
 - a. The initial field certificate inspection of existing pressure vessels shall take place by October 6, 2011.
 - b. Each pressure vessel, with the exception of pressure vessels that are under the supervision of a registered owner-user inspection agency, shall receive a certificate inspection triennially.
3. Pressure vessels and unfired boilers that are under the supervision of a registered owner-user inspection agency shall be inspected at intervals required by the National Board Inspection Code or API-510, as applicable.
4. The inspection of any pressure vessel(s) contained within a refrigeration system shall be conducted pursuant to the regulation on refrigeration systems and is not part of the pressure vessel inspection requirements.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by commissioned inspectors employed by an authorized inspection agency licensed to do business in the state and holding a *Certificate of Competency* from the department are accepted in lieu of inspections made by department inspectors.
2. The department must be notified of any *suspension of insurance*.
3. The department must be notified of *new business* and *discontinuance of insurance*.
4. The department must be notified of *rule violation(s)*.
5. The department must be notified of *refusal of entry*.

CERTIFICATE OF INSPECTION

1. A Certificate of Inspection for boilers, valid 12 months, is issued by the department upon payment of a \$50.00 fee per boiler by the insurer to the department provided the inspection was satisfactory.
2. A Certificate of Inspection for refrigeration systems, valid 12 months, is issued by the department upon payment of a \$40.00 fee per boiler by the insurer to the department provided the inspection was satisfactory.
3. The a Certificate of Inspection for pressure vessels is valid for the period indicated and in no case longer than 3-years and is issued by the department upon payment of a \$30.00 fee per pressure vessel by the insurer to the department provided the inspection was satisfactory.
4. The certificate fee for a boiler, pressure vessel or a refrigeration system inspected by a state-employed inspector must be paid upon the owner receiving an invoice from the department. A certificate is not issued if there are unabated violations.

STATE FEES

1. Boilers:
 - a. Greater than or equal to 10 but not greater than 60 square feet - **\$80.00** per object
 - b. Greater than or equal to 60 but not greater than 1,000 square feet - **\$110.00** per object
 - c. Greater than or equal to 1,000 square feet and above - **\$150.00** per object
2. Pressure vessels:
 - a. Less than or equal to 30 square feet in size - **\$20.00** per object
 - b. Greater than 30 but not greater than 60 square feet - **\$40.00** per object
 - c. Greater than 60 but not greater than 100 square feet - **\$60.00** per object
 - d. Greater than 100 square feet - **\$80.00** per object
3. Refrigeration Systems:
 - a. Greater than 3 and less than 25 tons - **\$100.00** per system
 - b. Greater than or equal to 25 tons, but less than 300 tons - **\$150.00** per system
 - c. Greater than or equal to 300 tons - **\$200.00** per system

4. Shop Inspections, AIA Services:

a. Boilers (the higher of the following shall apply):

- i. Inspection, per boiler - **\$100.00**
- ii. Daily visit of 4 hours or less - **\$320.00**
- iii. Daily visit over 4 hours - **\$600.00**

b. Pressure Vessels:

- i. Inspection, per specific vessel - **\$100.00**
- ii. Daily visit of 4 hours or less - **\$320.00**
- iii. Daily visit over 4 hours - **\$600.00**

Owner-User Inspection Agency

Owner-User Object Cost Per Pressure Vessel	Minimum Number of Pressure Vessels Inspected	Maximum Number of Pressure Vessels Inspected
\$15.00	1	Up to 25
\$7.50	26	Up to 100
\$6.00	101	Up to 500
\$4.50	501	& Over

MISCELLANEOUS

1. Each object approved for use shall be assigned a jurisdiction number which indicates it is registered. This number shall be located in the upper left hand corner of the certificate and shall also be affixed to the front of the object in such a manner as to be plainly visible.
2. Operators of boilers and specific refrigeration systems are licensed by the Mechanical Inspection Bureau of Boiler and Pressure Vessel Compliance (MIBPVC) in accordance with state law requirements.
3. Pressure vessel repairs and alterations must be performed by an accredited shop holding appropriate code symbol stamp(s) (e.g., the National Board "R" stamp or New Jersey "R" stamp, as appropriate).
4. Both API and National Board Owner-User programs are recognized. API Owners-Users may register with the state, receive an audit, and receive a *Certificate of Operation* in recognition of their program. The BB&PVC conducts an audit of the API owner-user triennially.
5. Each unfired pressure vessel shall be registered with the BB&PVC and shall receive a jurisdiction number following inspection by a certified inspector, except for the following:
 - a. UM pressure vessels exempt from inspection under N.J.A.C. 12:90-5.13(b), or
 - b. Pressure vessels inspected by an Owner-User Inspection Agency which has registered with the BB&PVC under the provisions of the regulation.
6. When a facility has registered as an Owner-User Inspection Agency in accordance with the provision of the regulations the facility shall maintain a listing of each pressure vessel at that facility and shall, during the triennial audit, provide the listing of pressure vessels to the BB&PVC.
7. Those facilities not operating under the provisions established for owner-users shall be inspected initially and thereafter triennially unless otherwise warranted by the condition of the pressure vessel.

NEW MEXICO

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STATE DEPARTMENT

J.T. Baca, Mechanical Bureau Chief
Regulation and Licensing Department
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Santa Fe, NM 87505

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Email — jerome.baca@state.nm.us
Fax — 505.827.7045

Express mail only:
725 St. Michael's Drive
Santa Fe, NM 87505

EMPOWERMENT

Construction Industries Division empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1978

Date of latest amendment to law: January 1998.
Date rules and regulations implemented: 1978.
Date of latest rules and regulations: January 1998.
State statute: New Mexico Administrative Code, Title 14. Housing and Construction, Chapter 9. Mechanical Codes, Part 4. *Boilers*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1998 Edition), Sections I, IV, IX
2. ASME CSD-1 (1998 Edition).
3. ANSI/ASME B31.1 (1998 Edition).
4. *National Board Inspection Code* (1998 Edition).
5. National Board registration required for boilers.
6. *Uniform Plumbing Code* and *Uniform Mechanical Code* (2003 Edition).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: none.
2. ASME Code: A, E, H, HLW, HV, PP, S, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. Listed and approved potable water heaters when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 250°F and 160 psi pressure;
 - c. A nominal water-containing capacity of 120 gallons.
2. Tanks connected to sprinkler(s).
3. Portable unfired pressure vessels constructed to US Department of Transportation and Interstate Commerce

Commission regulations used in such service.

4. Containers for liquefied petroleum gases, bulk oxygen, and medical gas regulated by the fire code or by the *New Mexico Liquefied Petroleum Gas Act of 1987*.
5. Unfired pressure vessels having a volume of 5 cubic feet or less and operated at pressures not exceeding 250 psi.
6. Pressure vessels in refrigeration systems regulated by Chapter 15 of the *Uniform Mechanical Code* (New Mexico).
7. Pressure tanks used in conjunction with coaxial cables, telephone cables, power cables, and other similar humidity control systems.
8. Any boiler subjected to regular inspection by federal inspectors or licensed by federal authorities.
9. Hydronic panel heating systems as described in Chapter 23 of latest approved edition of the *Uniform Mechanical Code*.
10. Public utilities, rural electric cooperatives, mine processing (administration facilities are not exempt), refinery processing, gas processing (administration facilities are not exempt), and lumber industries (sawmill only).

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers, high-temperature water boilers, miniature boilers, high-pressure steam generators:
 - a. An annual external inspection;
 - b. An annual internal inspection, where construction permits.

A certificate of inspection may be issued with an external inspection. However, an internal inspection must be made within six months of the external inspection.
2. Low-pressure steam boilers:
 - a. A biennial external inspection;
 - b. An internal inspection if need indicates.
3. Direct-fire steam jacketed kettles:
 - a. A biennial external inspection;
 - b. An internal inspection, if need indicates.
4. Low-pressure, hot-water heating boilers, and hot-water supply boilers:
 - a. A biennial external inspection;
 - b. An internal inspection, if need indicates.
5. Hydrostatic test: performed at the discretion of the inspector and witnessed by the inspector.
6. Any boiler repair by welding, other than of routine nature (that in any way affects the pressure-containing capability), requires a commissioned inspector's approval. The repair organization shall furnish a written report (National Board R-1 form).

INSURANCE INSPECTION REQUIREMENTS

1. The bureau must be notified within 30 days, on National Board or alternative forms acceptable to the bureau, of all boiler risks involving policies written, canceled, or not renewed. In the case of nonrenewal because of *dangerous conditions*, the inspection agency shall list in writing the defects found.
2. Insurance companies shall furnish the bureau a copy of all internal and external inspection reports on National Board or API-510 forms. All reports shall be mailed within 60 days of inspection.
3. Any inspection agency, authorized by the National Board, licensed to sell boiler or pressure vessel insurance in New Mexico, and insuring a boiler located in the state is required to inspect.
4. Insurance company inspectors must hold a *National Board Commission* and be commissioned by the state.

CERTIFICATE OF INSPECTION

A final mechanical inspection is issued by the inspector upon successful inspection.

STATE FEES

1. Power boilers and high-temperature water boilers:
 - a. External inspection - **\$30.00**
 - b. 4,000 square feet or less heating surface - **\$60.00**
 - c. More than 4,000 to 10,000 square feet heating surface - **\$70.00**
 - d. More than 10,000 square feet heating surface - **\$90.00**
2. Heating boilers:
 - a. External inspection - **\$30.00**
 - b. Internal without manhole - **\$30.00**
 - c. Internal with manhole - **\$50.00**
 - d. Hot-water supply boilers - **\$30.00**
3. Administration fee (one time only) - **\$37.50**

MISCELLANEOUS

1. Cities of 100,000 or greater population that have adopted a boiler code, in substantial compliance with the state boiler code, may enforce the provisions of the city code within their jurisdictions.
2. A *Certificate of Competency* is required to operate boilers in New Mexico. There are five levels: Boiler Operator Trainee, Boiler Operator Class I, II, and III, and Chief Boiler Technician.
3. A New Mexico commission and identification card can be obtained from the bureau by full-time employees of a National Board-authorized inspection agency. The request shall be initiated by the applicant's employer and shall be accompanied by a facsimile of the applicant's *National Board Commission* and commission card. Initial registration fee is \$75.00. Renewal fee is \$50.00 per year.
4. Repair organizations must hold a valid National Board "R," "VR," or "NR" stamp or be authorized by the Boiler Bureau.
5. Boilers must be marked with a tag bearing the New Mexico registration and serial numbers.

NEW ORLEANS, LOUISIANA

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MUNICIPAL DEPARTMENT

Mike Centineo, Director

Rudy Hardouin, Chief Mechanical Inspector
Department of Safety and Permits
Mechanical Inspection Bureau
1300 Perdido Street, Room 7E05
New Orleans, LA 70112

Telephone — 504.658.7165
Fax — 504.565.7211

EMPOWERMENT

Chief boiler inspector empowered to make, alter, amend, and interpret rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1929

Date of latest amendment to law: January 2004.
Date rules and regulations implemented: 2004.
Date of latest amendment to rules and regulations: January 2004.
City ordinance: City of New Orleans amendment to the 2000 ICC Mechanical Code.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI.
2. Code rules updated annually.
3. *Manufacturer's Data Reports* on ASME forms must be filed with the department before installation.
4. *National Board Inspection Code* (1998 Edition, 2000 Addendum).
5. National Board registration required for boilers and pressure vessels.
6. Special design or construction must be approved by the department.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All steam hot-water heating and hot-water supply boilers, and unfired pressure vessels, except: boilers and unfired pressure vessels in marine or railroad service under the inspection regulations of the federal government.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Steam boilers operating at 15 psi or less and hot-water boilers, provided they are built in accordance with ASME Code and located in private residences or dwellings of four families or fewer.
2. Unfired pressure vessels built in accordance with ASME Code and do not exceed:
 - a. Volume of 5 cubic feet;
 - b. Design pressure of 250 psi.

INSPECTIONS REQUIRED

1. Boilers:
 - a. One annual internal inspection;
 - b. One annual external inspection approximately six months following the internal inspection.
2. Unfired pressure vessels, air conditioning and refrigeration systems: one annual inspection.

Internal and external inspections shall be made within 12 months from the date of the last internal inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Initial inspection and inspection of all replacement installations requiring the chief inspector's approval of plans and specifications for boilers, unfired pressure vessels, and air conditioning or refrigerating systems shall be made by a department inspector.
3. Air conditioning systems and refrigerating systems are not exempt from city inspections unless complete system, exclusive of prime movers, is insured and inspected by insurance inspectors.
4. Reports of internal inspection must be filed with the department within 30 days of last annual inspection.
5. Reports of external inspections are not required unless there are code violations or dangerous conditions.
6. The department must be notified immediately, using National Board forms, of *suspension of insurance on account of dangerous conditions*.
7. The department must be notified within 30 days, using National Board forms, of *new business* and *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for 12 months from expiration date of the previous certificate, is issued by the department upon payment of a \$10.00 fee per object by the owner/user of the boiler, pressure vessel or air conditioning/refrigeration system. Fee shall be collected by the insurance carrier at the expiration date and paid to the department. Fee for hot-water heaters is \$5.00. (These fees may vary.)
2. An inspection certificate for a boiler inspected by an insurance company becomes invalid when the unit ceases to be insured by a duly authorized insurance company.

MUNICIPAL FEES

1. Boilers:
 - a. Up to and including 20 hp - **\$20.00**
 - b. Up to 21 and including 100 hp - **\$25.00**
 - c. More than 100 hp - **\$30.00**
2. Unfired pressure vessels:
 - a. Vessels which cannot be inspected internally - **\$20.00**
 - b. Vessels which can be inspected internally (through 200 gallons) - **\$25.00**
 - c. More than 200 gallons (for each additional 100 gallons) - **\$30.00**

Insurance companies are required to collect inspection fees.

MISCELLANEOUS

1. Inspections may be made only by those inspectors holding a *New Orleans Boilers Inspection Commission*.
2. A reciprocal New Orleans commission will be granted to inspectors holding a *National Board Commission* upon application to the chief mechanical inspector. Insurance inspectors must meet the conditions of the *New Orleans Building Code*.
3. A permit is required to sell, install, or repair boilers and pressure vessels.
4. Operators of boilers and pressure vessels are required to be licensed. An operator is required to be in attendance during boiler operation.

NEW YORK



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STATE DEPARTMENT

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EMPOWERMENT

The state legislature empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1911

Date of latest amendment to law: August 2004.
Date rules and regulations implemented: 1911 for high-pressure boilers and 1964 for low-pressure boilers.
Date of latest rules and regulations: April 1992.
State statute: New York State Laws, Labor, Chapter 31. *Boilers*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. *New York Industrial Code*, Rules 4 and 14.
2. ASME Code (Current Edition, Current Addendum), Sections I, II, IV, V, VIII (Division 1), and code cases.
3. Boilers built to ASME Code are acceptable, but must be shop-inspected by an inspector holding a *National Board Commission*.
4. Code addenda and case interpretations accepted automatically.
5. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms for boilers stamped ASME, NEW YORK STANDARD, or NATIONAL BOARD.
6. *National Board Inspection Code* (Current Edition, Current Addendum).
7. National Board registration required for high-pressure boilers and pressure vessels.
8. Special design or construction requires approval of the department.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, M, PP, S, U, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. Boilers subject to inspection by inspectors of boilers under the US Department of Transportation.
2. Boilers located on farms and used solely for agricultural purposes.

3. Steam or vapor boilers operating at a gage pressure of not more than 15 psi and which are located in dwellings occupied by fewer than six families.
4. Hot-water boilers which are located in dwellings occupied by fewer than six families.
5. Boilers subject to inspection or control of a federal agency.
6. Low-pressure boilers under 100,000 BTU per hour.
7. Miniature model locomotive, boat, tractor, or stationary engine constructed and maintained as a hobby and not for commercial use, and having a volume of less than 2 cubic feet and a grate area not in excess of 2 square feet.
8. Electric high-pressure miniature boilers.

All unfired pressure vessels, except:

1. Pressure vessels meeting the requirements of the US Department of Transportation for the shipment of liquids or gases under pressure.
2. An air tank on a vehicle used for carrying passengers or freight or used directly in the operation of trains.
3. Pressure vessels having a volume of 5 cubic feet or less or having an inside diameter not exceeding 6 inches.
4. Pressure vessels designed for pressures of less than 15 psi.
5. Hot-water supply storage tanks, provided none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A nominal water-containing capacity of 120 gallons.
6. Pressure vessels under federal control or regulation.
7. Pressure vessels containing water under pressure, including those containing air, the compression of which serves only as a cushion, provided neither of the following limitations is exceeded:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210°F.
8. Pressure vessels used for agricultural purposes.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Item	Internal	External
High-pressure steam boilers	1 Year	1 Year**
High-pressure hot-water boilers	3 Years*	1 Year
Low-pressure steam boilers	3 Years	2 Years
Low-pressure hot-water boilers	5 Years	2 Years

*If equipped with manholes and handholes, an annual internal inspection is required.
 **Approximately six months after each internal inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of inspection must be filed with the department on National Board forms — or electronically through the jurisdiction online system — within 21 days after inspection with a fee of \$100.00 for each boiler inspected.
3. Reports of external high-pressure inspections are not required provided an internal inspection report has been submitted.
4. Reports of all internal and external low-pressure inspections must be submitted. The internal low-pressure inspection is considered as a non-certificate inspection for which the \$100.00 fee will not be charged.
5. A shop inspection made by an inspector holding a *National Board Commission* will be accepted.
6. The department must be notified of *suspension of insurance on account of dangerous conditions*.
7. The department must be notified of new business and discontinuance of insurance.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for high-pressure boilers and 24 months for low-pressure boilers, is issued by the insurance company for insured boilers and by the department for uninsured boilers (excepted: cities performing their own inspections).

STATE FEES

1. Boilers – internal inspection - **\$200.00**
2. Boilers – external inspection - **\$75.00**
Not more than \$275.00 shall be charged for the inspection of any one boiler for any one year.
3. Boilers used with antique steam engines maintained as a hobby and displayed at fairs – internal inspection - **No Charge**
4. Boilers used with antique steam engines maintained as a hobby and displayed at fairs – external inspection - **No Charge**
5. Miniature high-pressure, nonelectric boilers - **\$50.00**

Penalty for delinquent payment (45 days) one times the original fee amount, (60 days) two times original invoice amount, (180 days) three times the original invoice amount.

MISCELLANEOUS

1. Examinations for *Certificate of Competency* are held by the State Boiler Examining Board on the first Wednesday and Thursday in March, June, September, and December. A \$100.00 examination fee is required.
2. *Reciprocal Commission* can be secured by an inspector holding a *National Board Commission*, provided his/her employer has filed an application together with a photostatic copy of the *National Board Commission* or *Certificate of Competency* issued by the state (where written examination was taken and the inspector appeared before the chief boiler inspector for an oral examination covering state requirements). The *Certificate of Competency* is renewed annually at no charge.
3. Repairs to boilers shall be performed by organizations in possession of a valid *National Board "R" Stamp* or a *New York State Repair Certificate of Authorization* and/or a valid *ASME Certificate of Authorization*. The repair organization shall have a documented quality control program containing a description of the scope of work it intends to perform with supporting welding procedures and qualification reports in accordance with Section IX of the ASME Code.
4. Alterations to boilers shall be performed in accordance with the *National Board Inspection Code*. An organization holding only a *National Board* or *New York State Repair Certificate of Authorization* may do alterations provided the design changes involved are certified by the holder of an appropriate ASME Code symbol stamp and *Certificate of Authorization* and such changes are verified by the ASME Code stamp holder's authorized inspector.

Alterations may be performed by an organization that holds an ASME Code symbol stamp listed in the same section of the ASME Code as the code symbol on the boiler to be altered.

5. There are no statewide boiler operator licensing laws.
6. A copy of Code Rules 4 and 14, *Construction, Installation, Inspection and Maintenance of High-Pressure Boilers; Construction of Unfired Pressure Vessels*, may be obtained by writing or calling the address under STATE DEPARTMENT or downloading from the Internet at http://www.labor.state.ny.us/workerprotection/safetyhealth/dosh_code_rules.shtm.

NEW YORK, NEW YORK



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MUNICIPAL DEPARTMENT

Rick D Chandler, P.E., Commissioner

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EMPOWERMENT

Board of Standards and Appeals empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1948

Date of latest amendment to law: March 1998.
Date rules and regulations implemented: 1948.
Date of latest rules and regulations: March 1998.
City Ordinance: *New York State Industrial Code* Rules 4 and 14.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1986 Edition, 1986 Addendum), Sections I, IV, V, VIII (Division 1), IX ASME Code and case interpretations accepted automatically.
2. ASME B31.1.
3. Manufacturers must file a copy of the *Manufacturer's Data Report* with the New York State Department of Labor on ASME forms for all boilers stamped "ASME" or "New York Standard." (P-2, H-2)
4. *National Board Inspection Code* (1998 Edition, 2000 Addendum).
5. National Board registration required for boilers and pressure vessels.
6. Electric steam generators must be constructed to Section I or IV codes.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, H, HLW, M, PP, S, UV, V.
3. Boilers built to ASME Code are acceptable but must be inspected and stamped "National Board" by an inspector holding a *National Board Commission*.
4. Manufacturers must register with the New York State Department of Labor and obtain authorization to fabricate and stamp boilers "New York Standard."

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers subject to inspection or control of a federal government agency.
2. Boilers subject to inspection by inspectors of boilers under the US Department of Transportation.
3. Boilers located on farms and used solely for agricultural purposes.
4. Steam or vapor boilers operating at a gage pressure of not more than 15 psi, and located in a dwelling occupied by fewer than six families and less than 350,000 BTU input.
5. Hot-water boilers located in a dwelling occupied by fewer than six families and less than 350,000 BTU input.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure steam boilers:
 - a. One annual external inspection;
 - b. One annual internal inspection.
2. High-pressure, high-temperature hot-water boilers:
 - a. One annual external inspection;
 - b. One internal inspection triennially. If equipped with manholes and handholes, an annual inspection is required. Such boilers shall be inspected externally annually approximately six months after each internal inspection.
3. Low-pressure steam boilers:
 - a. External inspection annually;
 - b. One internal inspection triennially.
4. Low-pressure, hot-water boilers:
 - a. External inspection annually;
 - b. One internal inspection quinquennially (every five years).
5. New boilers shall be hydrostatically tested upon installation and prior to service. Boilers shall be tested to 60 psi or 1-1/2 times the design pressure, whichever is greater.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Inspection reports must be filed with the department within 30 days after inspection.
3. The department must be notified on New York Form 322:
 - a. When insurance is suspended because of dangerous conditions;
 - b. When insurance on a vessel is discontinued; or
 - c. New items are insured.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for 12 months, is issued by the department for boilers inspected an insurance company.
2. The owner is required to pay the department a \$30.00 annual administrative fee for each insured boiler, and submit an annual inspection report.

MUNICIPAL FEES

Annual inspection fees for permits:

1. Low-pressure boiler - **\$30.00**
2. High-pressure boilers - **\$65.00**
3. Boiler inspections after a violation is issued - **\$65.00**

MISCELLANEOUS

1. The fire department takes jurisdiction over air tanks exceeding 100 psi. These tanks must be inspected and a certificate is issued by the fire department at five-year intervals, except that air tanks built and stamped with an ASME Code symbol are accepted for the first five-year period, provided *Manufacturer's Data Reports* are filed with the fire department at the time of installation.
2. Operators of high-pressure boilers over 10 hp or 99 square feet of heating surface are required to be licensed.
3. Permits are required to install boilers.
4. Local law 62/91 permits annual low-pressure boiler inspections to be performed by NYC-licensed master plumbers, NYC-licensed oil burner installers, NYC-licensed high-pressure boiler operators, and authorized insurance companies.

NEWFOUNDLAND AND LABRADOR



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PROVINCIAL DEPARTMENT

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EMPOWERMENT

Lieutenant Governor and House of Assembly empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1949

Date of latest amendment to law: January 1996.
Date rules and regulations implemented: 1996.
Date of latest rules and regulations: 2009.
Provincial statute: Statutes of Newfoundland and Labrador, Chapter P-41.01. *Public Safety Act*, Sections 1 through 38. Newfoundland Regulations, Chapter 119. *Boiler, Pressure Vessel and Compressed Gas Regulations*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (Current Edition), B52 (Current Edition), B139 (Current Edition), B149.1 (Current Edition), B149.2 (Current Edition), B149.3 (Current Edition), CSA Z7396.1 (Current Edition), CSA Z662C (Current Edition).
2. ASME Code (Current Edition, Current Addendum), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X
3. ASME Code addenda accepted automatically.
4. ASME B31.1 (Current Edition), B31.3 (Current Edition), B31.5 (Current Edition), B31.9 (Current Edition).
5. ASME U-1 form is acceptable if CRN and drawing numbers are included.
6. Manufacturers must file an *Affidavit of Manufacture* for each boiler or pressure vessel.
7. *National Board Inspection Code* (Current Edition, Current Addendum).
8. National Board registration required for boilers and pressure vessels brought in from outside Canada.
9. NFPA-50.
10. Standards for Tubular Exchanger Manufacturing Association (TEMA).
11. Special design or construction requires approval of the chief inspector.
12. Manufacturers must file drawings and specifications, in duplicate, for approval and registration before construction of any boiler or pressure vessel is started.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: all (when fabricated outside Canada).

For all boilers and pressure vessels CRNs are required.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, pressure vessels, and steam and refrigeration plants, except the following:

1. Boilers or pressure vessels subject to inspection under the *Canada Shipping Act*.
2. Boilers or pressure vessels subject to inspection by the Board of Transport Commissioners for Canada.
3. Boilers with a capacity of 60 kW or less (other than miniature boiler).
4. Boilers connected to a hot-water heating system where water is heated and circulated with no intervening valves between boiler and expansion tank (fully vented to the atmosphere).
5. Pressure system used solely for heating purposes in a private dwelling.
6. Pressure vessels other than for steam, operated with the relief valve set at 103 kilopascals or less.
7. Pressure vessels with internal diameters of 24 inches (610 mm) or less and containing both liquid and air used exclusively for hydraulic purposes at atmospheric temperatures (or used to serve as a cushion in a water pumping or heating system).
8. Pressure vessels having an internal diameter of 24 inches (610 mm) or less used for storage of hot water for domestic purposes.
9. Pressure vessels used for storage of water or oil when temperature of water or oil is less than 66°C.
10. A refrigerating system that has motive rating of 10.5 kW or less.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Steam and high temperature hot water boilers: initial and annual internal and external inspection.
2. Hot-water boilers: initial and inspection, biennial internal and external inspection.
3. Hot-water tanks: initial inspection, internal inspection at first 24-month interval and every 48 months thereafter. External inspection every 24 months.
4. Indirectly heated hot-water tanks: initial inspection, internal inspection at first 36-month interval and every 72 months thereafter. External inspection every 36 months.
5. Pressure vessels: initial and biennial internal and external inspection.
6. Air receivers less than 36 inches in diameter: triennial internal and external inspection.
7. Group A1 refrigeration pressure vessels and LPG and other non-corrosive storage vessels initial and external inspection every 48 months.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by a department inspector.

CERTIFICATE OF INSPECTION

Certificate of Inspection is valid for period issued, unless canceled, withdrawn, or suspended by the chief inspector for just cause.

PROVINCIAL FEES

Fees for inspection of construction, extensive repairs, secondhand boilers, and pressure vessels when sold or exchanged for subsequent use, and annual operating fees are fixed by the department based on the total output in kilowatts or on the size of unfired pressure vessels, and on the capacity of new steam plants, refrigerating plants, and piping installations.

MISCELLANEOUS

1. Welders are subject to an initial qualification test. Retest not required when jurisdiction-issued *Log Book* has proof of continued qualification per ASME Code Section IX. Retesting for program audit purposes may be required.
2. Permission to sell, install, or reinstall, boilers and pressure vessels must be obtained from the department.
3. All heating plants over 1800 kW and all power plants over 600 kW must have a certified engineer in charge. Operators of registered plants are required to be certified.

NORTH CAROLINA



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STATE DEPARTMENT

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EMPOWERMENT

The commissioner is empowered to adopt, modify, or revoke rules and regulations.
(Contact above official for more information.)

DATE OF LAW PASSAGE: 1935

Date of latest amendment to law: August 2015.
Date rules and regulations implemented: 1935.
Date of latest rules and regulations: March 2015.
State statute: North Carolina General Statutes, Chapter 95, Article 7A, and North Carolina Administrative Code, Title 13, Chapter 13.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition, Current Addenda), all sections.
2. Code cases must be approved before use.
3. ASME B31.1.
4. Manufacturers must file a copy of *Manufacturer's Data Report* on ASME forms with the National Board.
5. *National Board Inspection Code* (Current Edition, Current Addenda).
6. National Board registration required for boilers and pressure vessels.
7. Special design or construction requires approval before fabrication is started.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: all.

North Carolina identification number required upon first inspection.

Repairs and Alterations:

Upon completion of work, R stamp holders must send copies of 'R1' and 'R2' reports, as appropriate, to the Bureau Chief for pressure retaining equipment operated in North Carolina.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

This Article shall apply to all boilers and pressure vessels constructed, used, or designed for operation in this State including all new and existing installations except the following.

1. Boilers and pressure vessels owned and/or operated by the federal government, unless the agency in question has requested coverage by this Article.
2. Pressure vessels used for transportation or storage of compressed gases when constructed in compliance with the specifications of the US Department of Transportation (and when charged with gas marked, maintained, and periodically requalified for use, as required by appropriate regulations of the US Department of Transportation).
3. Portable pressure vessels used for agricultural purposes only, or for pumping or drilling in an open field for water, gas, coal, gold, talc, or other minerals and metals.
4. Boilers and pressure vessels which are located in private residences or in apartment houses of fewer than six families.
5. Air tanks located on vehicles licensed under the rules and regulations of other state authorities operating under rules and regulations substantially similar to those of this state and used for carrying passengers or freight within interstate commerce.
6. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
7. Pressure vessels that do not exceed the following limitations if the vessel is not equipped with a quick-actuating closure:
 - a. 5 cubic feet in volume and 250 psig pressure;
 - b. 3 cubic feet in volume and 350 psig pressure;
 - c. 1-1/2 cubic feet in volume and 600 psig pressure;
 - d. An inside diameter of 6 inches with no limitations on pressure.
8. Pressure vessels operating at a working pressure not exceeding 15 psig.
9. Pressure vessels with a nominal water-containing capacity of 120 gallons or less and containing water under pressure at temperatures not exceeding 120°F, including those containing air, the compression of which serves as a cushion.
10. Boilers and pressure vessels on railroad steam locomotives that are subject to federal safety regulations.
11. Coil-type hot-water supply boilers, generally referred to as steam jennies, where the water can flash into steam when released directly into the atmosphere through a manually operated nozzle and where adequate safety relief valves and controls are installed on them, provided none of the following limitations is exceeded:
 - a. There is no drum, header, or other steam space;
 - b. No steam is generated within the coil;
 - c. Maximum 1-inch tube size;
 - d. Maximum 3/4-inch nominal pipe size;
 - e. Maximum 6-gallon nominal water-storage capacity;
 - f. Maximum water temperature of 350°F.
12. Pressure vessels containing water at a temperature not exceeding 110°F. (This provision does not exclude hydropneumatic pressure vessels from regulation.)
13. Air tanks not exceeding 8 cubic feet in volume and installed on a service vehicle.
14. Autoclaves located in medical offices and hospitals that are less than 5 cubic feet in volume, even if they are equipped with a quick actuating closure.
15. Coil-type hot-water supply boilers of the instantaneous type where adequate safety relief valves and controls are installed and the following limitations are not exceeded:
 - a. There is no drum, or header;
 - b. No steam is generated within the coil;
 - c. Maximum 1-inch tube size;
 - d. Maximum 3/4-inch nominal pipe size;
 - e. Maximum 6 gallon nominal water storage capacity;
 - f. Water temperature of 250°F or less;
 - g. Heat input of 400,000 BTU per hour or 110 kW or less;

- h. Maximum pressure of 260 psig.
16. Toy boilers, if all of the following apply:
- Water containing volume of the boiler is less than 1 quart;
 - Operating pressure does not exceed 15 psig;
 - Maximum outside diameter of the shell is no greater than 6 inches;
 - Boiler is manually fired by solid fuels.
17. Pressure vessels associated with electrical apparatus in electrical switchyards if the pressure vessels have proper pressure relief devices.
18. Carbon dioxide tanks used in beverage dispensing service.
19. Hot-water supply boilers or water heaters which are directly-fired with oil, gas, or electricity, or hot-water supply tanks heated by steam or other indirect means, not exceeding:
- Heat input of 200,000 BTU per hour or 58.6 Kw;
 - Nominal water capacity of 120 gallons provided they are equipped with ASME Code and National Board certified safety relief valves.
20. The construction standards for pressure vessels installed prior to December 31, 1981, which meet the following:
- Constructed of one-piece, unwelded, forged construction;
 - Operating, or could be operated, under the laws of any state in the US or province in Canada where one or more sections of the ASME Code have been adopted;
 - Transferred into this state without a change of ownership;
 - Has been determined by the chief inspector to be constructed under standards substantially equivalent to those established by the Department at the time of transfer, provided it is equipped with ASME Code and National Board certified safety relief valves.
21. The construction standards for pressure vessels installed prior to December 31, 1984, which meet the following:
- Manufactured from gray iron casting material, as specified by the American Society for Testing and Materials (ASTM) 48-60T/30;
 - Constructed prior to December 31, 1967, and operating, or could be operated, under the laws of any state in the US or province in Canada where one or more sections of the ASME Code have been adopted;
 - Transferred into this state without a change of ownership;
 - Has been determined by the chief inspector to be constructed under standards substantially equivalent to those established by the Department at the time of transfer, provided it is equipped with ASME Code and National Board certified safety relief valves.
22. The construction standards for hydropneumatic tanks installed or operated by a community water system prior to January 1, 1986.
23. The inspection requirements established by the Department of Labor shall not apply to pressure vessels used for transportation or storage of liquefied petroleum gas but are inspected in accordance with the requirements established by the Department of Agriculture. The construction and repair of pressure vessels used for transportation or storage of liquefied petroleum gas shall be in accordance with NFPA 58, *Liquefied Petroleum Gas Code*. NFPA 58 requires construction in accordance with the ASME Code. Repairs shall be in accordance with the NBIC which requires the repair firm to be an authorized "R" Stamp holder.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

ITEM	INTERNAL	EXTERNAL
High-pressure boilers	1 Year	1 Year
Miniature and coil-type high-pressure boilers	—	1 Year
Low-pressure boilers and pressure vessels	—	2 Years

Hydropneumatic storage tanks	—	4 Years
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An inspector, commissioned in North Carolina, shall inspect all boilers and pressure vessels at the time of installation and at regular intervals thereafter. State inspectors conduct all first inspections.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the commissioner are accepted in lieu of inspections made by a deputy inspector. Reports of inspection must be filed with the bureau chief within 10 working days after inspection.
2. The bureau chief must be notified of policy changes within 30 days of the action.
3. Unsafe conditions must be reported immediately.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for 12 months for high-pressure boilers and high-pressure, high-temperature water boilers, 24 months for low-pressure boilers and pressure vessels, and 48 months for hydropneumatic tanks, is issued by the bureau chief upon payment of a fee of \$30.00 for each boiler or pressure vessel inspected by an insurance inspector.
2. *Certificate of Inspection* is required prior to operation of a boiler or pressure vessel (except those inspected by an owner/user inspector).
3. An authorized owner/user must submit \$25.00 annually for each pressure vessel inspected by an owner/user inspector.

STATE FEES

1. Boilers – internal inspection:
 - a. With a heating surface less than 500 square feet - **\$85.00**
 - b. With a heating surface 500 square feet or more, but less than 5,000 square feet - **\$235.00**
 - c. With a heating surface 5,000 square feet or more - **\$600.00**
 - d. Cast iron boilers - **\$80.00**
 - e. Locomotive (Antique exhibition/show) - **\$150.00**
 - f. Exhibition (Traction engine, etc.) - **\$50.00**
 - g. Hobby - **\$35.00**
2. Boilers – external inspection:
 - a. With a heating surface less than 500 square feet - **\$50.00**
 - b. With a heating surface 500 square feet or more, but less than 5,000 square feet - **\$120.00**
 - c. With a heating surface 5,000 square feet or more - **\$330.00**
 - d. Cast iron - **\$50.00**
3. Pressure vessels (diameter or width multiplied by length in feet) – internal inspection:
 - a. Less than 20 square feet - **\$45.00**
 - b. 20 square feet or more, but less than 50 square feet - **\$60.00**
 - c. 50 square feet or more, but less than 70 square feet - **\$135.00**
 - d. 70 square feet or more - **\$190.00**
4. Pressure vessels (diameter or width multiplied by length in feet) – external inspection:
 - a. Less than 20 square feet - **\$40.00**
 - b. 20 square feet or more, but less than 50 square feet - **\$50.00**
 - c. 50 square feet or more, but less than 70 square feet - **\$85.00**
 - d. 70 square feet or more - **\$135.00**
5. Heat exchangers where the heating surface is:
 - a. Less than 500 square feet - **\$45.00**
 - b. 500 or more square feet, but less than 1,000 square feet - **\$60.00**
 - c. 1,000 or more square feet, but less than 2,000 square feet - **\$90.00**

d. 2,000 or more square feet, but less than 3,000 square feet - **\$130.00**

e. 3,000 square feet or more - **\$180.00**

Inspections performed outside of normal working hours are considered special inspections and are subject to varying fees, including a fee for working outside of normal working hours. Contact the bureau for additional information.

MISCELLANEOUS

1. The *National Board Inspection Code* is mandatory for repairs and alterations. Repairs by welding and alterations must be performed by "R" stamp holders.
2. North Carolina commission card is issued for a fee of \$35.00 to inspectors holding an approved *National Board Commission*. Commission cards must be renewed annually by December 31. An examination on North Carolina law and rules is required for issuance of a North Carolina commission.
3. An operator's license is not required for boiler operators.
4. Used vessel installation requires special permission from the Chief Inspector.

NORTH DAKOTA



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STATE DEPARTMENT

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EMPOWERMENT

The commissioner of insurance empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1953

Date of latest amendment to law: July 2011.
Date rules and regulations implemented: 1953.
Date of latest rules and regulations: January 2016.
State statute: North Dakota Statutes, Title 26.1. Insurance, Chapter 22.1. *Boiler Inspection*, Sections 1 through 14.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VIII (Divisions 1, 2, 3), IX, X. ASME B31.1 (2012 Edition) for power piping only within the scope of Section I.
2. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms prior to installation. Department prefers *Manufacturer's Data Reports* to be registered with the chief boiler inspector through the National Board.
3. *National Board Inspection Code* (2013 Edition).
4. National Board registration required for boilers and pressure vessels.
5. API-510 (2006 Edition).
6. Special design or construction requires prior approval of the chief inspector.
7. Superheaters, without exception, must be constructed to ASME Code Section I.
8. Blowdown tanks must meet the provisions of *National Board Rules and Recommendations for the Design and Construction of Boiler Blowoff Systems* (2006).
9. Welding requirements: National Board "R" or equivalent state authorization.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NB, R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, RP, S, U, U2, U3, UD, UV, UV3, V.

All boilers shall be stamped with a North Dakota serial number, if possible.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels subject to federal inspection or under federal control.
2. Boilers and pressure vessels located on farms and used solely for agricultural purposes.
3. Heating boilers which are located in private residences or in apartment houses of fewer than six family units.
4. Hot-water supply boilers, not exceeding the following:
 - a. 200,000 BTU per hour input;
 - b. 160 psig;
 - c. 250°F.
5. Portable steam cleaners of the type commonly used in garages.
6. Miniature hobby boilers not exceeding an inside diameter of 10 inches and a grate area not exceeding 1-1/2 square feet (properly equipped with a safety valve, water level indicator, and pressure gage).
7. Electric boilers used as an integral part of an espresso coffee machine, provided the boiler does not exceed:
 - a. 1-1/2 cubic feet in water capacity;
 - b. 50 psi pressure.
8. All pressure vessels within the scope of ASME Code (2013 Edition), Section VIII, Divisions 1, 2, 3, with these exceptions:
 - a. Pressure vessels under federal control;
 - b. Pressure vessels that do not exceed:
 - i. 30 water gallons in volume (4 cubic feet) and 250 psig in pressure;
 - ii. 1-1/2 cubic feet in volume and 600 psig in pressure;
 - iii. Inside diameter of 6 inches with no limitation on pressure.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING. Field inspection of pressure vessels (other than anhydrous ammonia pressure vessels) is not required.

INSPECTIONS REQUIRED

Item	Internal	External
High-pressure boilers	1 Year	1 Year*
Low-pressure steam boilers, steel	2 Years	2 Years
Low-pressure steam boilers, cast-iron	—	1 Year
Hot-water heating and hot-water supply boilers	—	3 Years**

*External inspection while under pressure.

**One annual external inspection for those located in hospitals, nursing homes, schools, nursery schools, and kindergartens.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by National Board approved Authorized Inspection Agencies and commissioned by the department are accepted in lieu of inspections made by a department inspector with respect to boilers insured or inspected by their respective companies.
2. Inspections made by inspectors employed by owners/users and commissioned by the department are accepted in lieu of inspections made by a department inspector.
3. Reports of all inspections must be filed with the department on special state forms within 15 days after inspection.
4. The department must be notified within 30 days of *suspension of insurance on account of dangerous conditions, discontinuance or refusal of insurance, and new business.*

5. There is a \$20.00 per year fee for each *Certificate of Inspection* issued. Payment of this fee is the responsibility of the owner/user.
6. Insurance companies are required to inspect those objects they insure. If an inspection report is not filed within 90 days of the certificate due date, the state may make the inspection and must bill the insuring company an inspection fee not to exceed \$500.00 per day plus expenses.
7. The State of North Dakota will make all initial inspections.
8. Insurance inspectors must obtain new commissions in person following an oral interview.
9. Renewal of insurance inspector's commission card is required by December of each year. Cost is \$40.00 for a new or renewal card.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for power boilers, and 24 months for low-pressure heating boilers and hot-water supply boilers, is issued by the department upon receipt of a satisfactory report of boiler inspection. A *Certificate of Inspection* is valid for 36 months for hot-water heating and hot-water supply boilers in apartments.

STATE FEES

1. High-pressure boilers – internal inspection:
 - a. 50 square feet or less heating surface - **\$80.00**
 - b. More than 50 square feet to 500 square feet heating surface - **\$100.00**
 - c. More than 500 square feet to 4,000 square feet heating surface - **\$120.00**
 - d. More than 4,000 square feet heating surface - **\$150.00**
2. High-pressure boilers – external inspection:
 - a. 50 square feet or less heating surface - **\$60.00**
 - b. More than 50 square feet to 500 square feet heating surface - **\$80.00**
 - c. More than 500 square feet to 4,000 square feet heating surface - **\$80.00**
 - d. More than 4,000 square feet heating surface - **\$80.00**
 - e. 100 kilowatts or less - **\$60.00**
 - f. More than 100 kilowatts - **\$80.00**
3. Low-pressure boilers – internal inspection:
 - a. Without manway - **\$75.00**
 - b. With manway - **\$85.00**
4. Low-pressure boilers – external inspection:
 - a. Hot-water heat and low-pressure steam - **\$50.00**
 - b. Hot-water supply - **\$35.00**
5. Steam traction engines – internal inspection - **\$60.00**
6. Steam traction engines – external inspection - **\$55.00**
7. Steam traction engines and hydrostatic test - **\$70.00**
8. Steam traction engines and ultrasonic survey, per hour - **\$60.00**
9. Portable Oil Field Boilers - Internal or External - **\$75.00** per hour, plus meals, mileage, lodging

MISCELLANEOUS

1. All welders welding pressure parts of boilers must be certified for ASME positions and registered with the department. Registration is renewed January 1 of each year.
2. The department requires all repairs and alterations be in accordance with the *National Board Inspection Code* or API-510 Inspection Code as applicable.
3. Any person or firm repairing safety valves must possess a valid "VR" *Certificate of Authorization* from the National Board.
4. A license is not required to operate a boiler or pressure vessel, except for hobby (historical) boilers.
5. A copy of North Dakota Boiler Rules and Regulations (includes pressure vessel regulations) may be obtained from North Dakota Insurance Department's Web site: <http://www.nd.gov/ndins/specialfunds/boiler/>

6. Boiler inspection blank forms available on Web site.

NORTHWEST TERRITORIES



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TERRITORY DEPARTMENT

Ron McRae, Manager

Matthias Mailman, Chief Boiler Inspector
Government of Northwest Territories
Public Works and Services
P.O. Box 1320
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Canada

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Express mail only:
5003 49th Street
Yellowknife, Northwest Territories
X1A 2L9 Canada

EMPOWERMENT

Commissioner of the Northwest Territories empowered to make regulations and prescribe forms under the act. Individual inspectors have responsibility for districts and regions of the Northwest Territories as prescribed by the chief boiler inspector.

Boiler Board: No.

DATE OF LAW PASSAGE: 1951

Date of latest amendment to law: December 1998.
Date rules and regulations implemented: 1951.
Date of latest rules and regulations: December 1998.
Provincial statute: Revised Statutes of Northwest Territories, Chapter B2. *Boilers and Pressure Vessels*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (Current Edition).
2. ASME Code (Current Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2), IX
3. ANSI/ASME B31.1 (Current Edition), B31.3 (Current Edition).
4. Before manufacturing, manufacturers must register with the department and submit designs and specifications for approval.
5. Special design or construction requires approval of chief boiler inspector, survey, or design engineer.
6. Secondhand boilers or pressure vessels shall not be sold, exchanged, or otherwise disposed of; owner must notify the chief boiler inspector of the Northwest Territories.
7. Boilers or pressure vessels imported into the Northwest Territories shall not be installed until approved by the chief boiler inspector.
8. *National Board Inspection Code* (Current Edition, Current Addendum).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: A, E, H, HLW, HV, M, S, U, U2, UM, UV, V.

Boilers and pressure vessels require jurisdictional registration number assigned by the chief boiler inspector.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels subject to exemptions to the *Boilers and Pressure Vessels Act* and regulations:

1. Boilers less than 30 kW.
2. Pressure vessels less than 6 inches diameter, 1-1/2 cubic feet or 15 psi.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Boilers and pressure vessels: one annual external inspection or periodic as required by chief boiler inspector.
2. Internal inspection is at the discretion of chief boiler inspector.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by any duly incorporated insurance company may be accepted, subject to chief boiler inspector's recommendation, in lieu of inspections made by department.
2. A copy of all inspection reports must be filed with chief boiler inspector within 21 days.
3. Chief boiler inspector must be notified of *cancelation, suspension, or rejection* of insurance.

CERTIFICATE OF INSPECTION

Certificate of Inspection is valid for 12 months or as specified by the chief boiler inspector.

TERRITORY FEES

1. \$82.00 CAD per hour for special inspections. No charge for annual inspections.
2. There is an annual registration fee which varies between boilers, pressure vessels, and size.

MISCELLANEOUS

1. ASME CSD-1 adopted as reference code as of June 2005.
2. Repairs require a certified welder and/or approved contractor.
3. Operators of boilers above 750 kW for low-pressure boilers and 100 kW for high-pressure boilers are required to be certified. Depending on rating and location of boiler, operator is required to be in attendance.
4. *National Board Inspection Code* adopted as of June 2005.
5. Installation permits are required for boilers and pressure vessels requiring registration and inspection in accordance with *Boilers and Pressure Vessels Act* and regulations.

NOVA SCOTIA



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PROVINCIAL DEPARTMENT

Peter Dodge, P. Eng., Chief Inspector, Manager
Labour & Advanced Education
Technical Safety Division
Boilers and Pressure Vessel Section
103 Garland Avenue, 3rd Floor
Dartmouth, Nova Scotia B3B 0K5
Canada

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EMPOWERMENT

Technical Safety Act

- Boilers and Pressure Equipment (BPE) Regulations
- Fee Regulations
- Technical Safety General Regulations
- Technical Safety Standards Regulations

Boiler Board: No.

DATE OF LAW PASSAGE: 1914

Date of latest amendment to law: 2011.
Date rules and regulations implemented: 1949.
Date of latest rules and regulations: April 2011.
Provincial statute: *Boiler and Pressure Equipment Regulations* under Section 49 of the *Technical Safety Act*. NS reg. 10/2011.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51, CSA B52, and Nova Scotia (NS) regulations.
2. ASME Code (six months after release), Sections I, II, IV, V, VIII (Divisions 1, 2, 3), IX, X, and code cases.
3. ASME Code addenda and case interpretations accepted after review.
4. ASME U-1 form is acceptable if CRN and drawing numbers are included.
5. Manufacturers must register designs with the department and obtain authorization to fabricate power boilers, unfired pressure vessels, and fittings for installation in the province.
6. *National Board Inspection Code* (Current Edition, Current Addendum).
7. Boiler and pressure vessel designs must be registered with the department before objects are manufactured.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted), VR.
2. ASME Code: A, M, PP, S, U, U2, UM, UV, V.

ASME stamps are accepted for boilers and pressure vessels manufactured outside of Canada.

A CRN is required on boilers and pressure vessels.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boiler systems and pressure equipment. All of the following products are exempt:

1. a boiler system or pressure equipment that is subject to the Canada Shipping Act (Canada);
2. a boiler system or pressure equipment that is subject to requirements made by the federal Department of Transport[, Infrastructure and Communities];
3. a boiler that has a maximum output capacity of 150 kW (507 104 BTU/hr) or less and has
 - a. a steam service with a system safety or relief valve set at a pressure of 103 kPag (15 psig) or lower, or
 - b. hot water service with a system safety or relief valve set at a pressure of 206.7 kPag (30 psig) or lower;
4. a boiler system located in a residential building that has 12 dwelling units or fewer;
5. a boiler that is fully vented to atmosphere and connected to a hot water heating system in which water is heated and circulated with no intervening stop valves between the boiler and the expansion tank;
6. a pressure vessel operated with a system safety or relief valve set at a pressure of 103 kPag (15 psig) or lower;
7. a pressure vessel that has a diameter of 610 mm (24 in.) or less and contains both liquid and air, that is used
 - a. exclusively for hydraulic purposes at atmospheric temperatures, or
 - b. as a cushion tank in a water pumping system or an expansion tank in a heating system;
8. a refrigeration plant that has a common, connected refrigerant with a maximum output capacity within a 24-hour period of 11 kW (3 tons) or less;
9. pressure vessel that has a diameter of 610 mm (24 in.) or less and is used to store hot water at a temperature of 121 °C (250 °F) or lower;
10. a pressure piping system with any of the following types of piping or tubing:
 - a. piping that is part of a system that is operating at a temperature of 121 °C (250 °F) or lower, and has
 - i. a steam service with [a] system safety or relief valve set at a pressure of 103 kPag (15 psig) or lower, or
 - ii. a water service with [a] system safety or relief valve set at a pressure of 1103 kPag (160 psig) or lower,
 - b. piping or tubing with [a] system safety or relief valve set at a pressure of 690 kPag (100 psig) or lower and a temperature between -29 °C (-20 °F) and 121 °C (250 °F), and the system is used to deliver treated or non-treated domestic water, products for human consumption, glycols, or non-toxic and non-lethal substances that are considered chemically and environmentally benign,
 - c. air piping or tubing that has a system safety or relief valve set at a pressure of 1379 kPag (200 psig) or lower,
 - d. piping or tubing that is part of a breathing air system that is modularized, manufactured and has a certification mark of a recognized certification organization,
 - e. piping or tubing used directly in
 - i. pneumatically or hydraulically controlled instruments, or
 - ii. steam tracing,
 - f. refrigeration piping or tubing of a refrigeration system that has a maximum output capacity of 11 kW or less, or air conditioning used for human comfort,
 - g. piping or tubing used for the delivery of fuels directly into a combustion system and subject to the *Fuel Safety Regulations* made under the *Technical Safety Act*,
 - h. piping or tubing in a piping system used for fire suppression that is subject to the *Fire Safety Act*,
 - i. piping or tubing used to deliver medical and inert gases,
 - j. threaded piping of nominal diameter 50 mm (DN50) or 60.33 mm in outside diameter (nominal pipe size 2 in. (NPS 2) or 2.375 in. in outside diameter) or less with a system safety or relief valve set at a pressure of 1034 kPag (150 psig) or lower if it either
 - i. meets the BPE standards, or
 - ii. is a pressure piping system that meets the requirements of the industry standard for the

particular pressure piping system as determined by the BPE chief inspector;

11. a pressure vessel that has a capacity of 42.5 L (1.5 cu. ft.) or less and is included within 1 of the following types or classes:
 - a. air starting tank,
 - b. autoclave,
 - c. in-line separator,
 - d. steam jacketed kettle,
 - e. steam jacketed sterilizer;
12. a pressure vessel that is an integral part of a rotating or reciprocating mechanical device, such as a pump, compressor, turbine, generator, engine and hydraulic or pneumatic cylinder, and the primary design considerations or stresses of which are derived from the functional requirements of the device;
13. a domestic hot water heater that has a diameter of 762 mm (30 in.) or less and is oil, propane or natural gas fired or uses electrical elements, spargers, jackets or coils as a heat source;
14. a pressure vessel, fitting or pressure piping system at a temperature of 121 °C (250 °F) or lower that is used exclusively for hydraulics.

A pressure vessel that has a capacity of 42.5 L (1.5 cu. ft.) or less and is of a type or class not listed in clause (11) is exempt from the requirement to have a BPE permit in *Boiler and Pressure Equipment Regulations*, Section 33 but the design must be registered as a fitting under Section 9.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. An owner of a regulated product must keep the regulated product properly maintained and inspected as required in this Section.
2. An owner of a boiler with a maximum output capacity of 150 kW (507 104 BTU/hr) or greater at 103 kPag (15 psig) of steam or lower, or operating at a pressure of 206.7 kPag (30 psig) of hot water or lower, must ensure that the boiler is either
 - a. inspected by a boiler inspector as directed by the BPE chief inspector; or
 - b. given an acceptable condition report that is completed and signed by an oil burner mechanic or gas technician authorized under the *Fuel Safety Regulations* made under the *Technical Safety Act* and provided to the BPE chief inspector.
3. An owner of a boiler operating at a pressure of 103 kPag (15 psig) of steam or higher, or a pressure of 206.7 kPag (30 psig) of hot water or higher, must ensure that the boiler is inspected by a boiler inspector as directed by the BPE chief inspector.
4. The BPE chief inspector may inspect a regulated product whenever the BPE chief inspector considers it necessary.
5. An owner of a regulated product is responsible for paying the BPE fees for any inspection conducted under (4).

CERTIFICATE OF INSPECTION

A person must hold an *equipment licence* to use or operate a boiler, pressure vessel or refrigeration plant, or to cause or permit a boiler, pressure vessel or refrigeration plant to be used or operated.

An *equipment licence* is valid until the expiry date specified on the licence unless it is suspended or revoked earlier by the BPE chief inspector.

PROVINCIAL FEES (see <http://www.novascotia.ca/just/regulations/regs/tsfees.htm> for further *Technical Safety Fees Regulations*)

Fees for installation and periodic inspections:

1. Power boilers:
 - a. Up to and including 23.5 m² - **\$50.05 CAD**
 - b. More than 23.5 m² to 70.0 m² - **\$101.75 CAD**

- c. More than 70.0 m² to 186.0 m² - **\$150.10 CAD**
 - d. More than 186.0 m² to 464.5 m² - **\$218.90 CAD**
 - e. More than 464.5 m² to 1394.0 m² - **\$268.90 CAD**
 - f. More than 1394.0 m² to 2788.0 m² - **\$337.70 CAD**
 - g. More than 2788.0 m² - **\$337.70 CAD**
 - h. Plus \$3.75 CAD per 46.5 m² or part thereof in excess of 2788 m² to a maximum fee of - **\$938.10 CAD**
2. Pressure vessels, heat exchangers, and pressure equipment: the following fees shall apply to the first 3 m of the length, beyond which an additional fee of \$25.00 CAD for each 3 m or part of 3 m in overall length beyond the first 3 m in length:
- a. Up to 610 mm diameter - **\$37.55 CAD**
 - b. More than 610 mm diameter to 762 mm - **\$75.05 CAD**
 - c. More than 762 mm to 1270 mm - **\$89.05 CAD**
 - d. More than 1270 mm diameter to 1778 mm - **\$112.60 CAD**
 - e. More than 1778 mm diameter to 2540 mm - **\$150.10 CAD**
 - f. More than 2540 mm diameter to 3048 mm - **\$175.10 CAD**
 - g. More than 3048 mm diameter - **\$200.15 CAD**

Design Registration Fees:

1. Boilers:
- a. Up to and including 232.5 m² - **\$112.60 CAD**
 - b. Over 232.5 m² to 464.5 m² - **\$250.15 CAD**
 - c. Over 464.5 m² to 929.5 m² - **\$375.25 CAD**
 - d. Over 929.5 m² to 2323.5 m² - **\$625.40 CAD**
 - e. Over 2323.5 m² - **\$625.40 CAD**
plus \$3.75 CAD per 5 m² or part of 5 m² in excess of 2323.5 m².
2. Pressure equipment, other than a heat exchanger, if the product of the diameter or the width of the pressure equipment multiplied by its length over the heads is:
- a. Not greater than 1.0 m² - **\$62.55 CAD**
 - b. Greater than 1.0 m² but not greater than 3.0 m² - **\$89.05 CAD**
 - c. Greater than 3.0 m² but not greater than 5.5 m² - **\$133.55 CAD**
 - d. Greater than 5.5 m² but not greater than 11.5 m² - **\$190.80 CAD**
 - e. Greater than 11.5 m² but not greater than 23.5 m² - **\$250.15 CAD**
 - f. Greater than 23.5 m² but not greater than 46.5 m² - **\$375.25 CAD**
 - g. Greater than 46.5 m² - **\$625.40 CAD**
3. Heat exchanger:
- a. Up to and including 5.0 m² heating surface - **\$101.75 CAD**
 - b. Over 5.0 m² to 18.5 m² - **\$125.10 CAD**
 - c. Over 18.5 m² to 28.0 m² - **\$190.80 CAD**
 - d. Over 28.0 m² to 46.5 m² - **\$250.15 CAD**
 - e. Over 46.5 m² of heating surface - **\$317.95 CAD**
4. Pressure piping system in a power plant:
- a. Up to and including 500 HP - **\$125.10 CAD**
 - b. Over 500 HP to 1,000 HP - **\$250.15 CAD**
 - c. Over 1,000 HP - **\$375.25 CAD**
5. Design survey and registration fees for fittings:

a. Single fitting - **\$37.55 CAD**

b. Range of fittings in a single category - **\$137.60 CAD**

MISCELLANEOUS

1. An individual must hold a BPE *certificate of competency* (inspections) to be a boiler inspector and perform the regulated work of inspections for certification of boilers, pressure vessels or pressure piping systems.
2. Operators of steam boilers are required to be licensed. See the *Crane Operators' and Power Engineers' Act, 2000*.
3. See <http://www.novascotia.ca/just/regulations/regs/tsboiler.htm> for further *Boiler and Pressure Equipment Regulations*.

NUNAVUT TERRITORY



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TERRITORY DEPARTMENT

Department of Community and Government Services
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Cambridge Bay, Nunavut X0B 0C0
Canada

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Fax — 867.983.4152

EMPOWERMENT

Commissioner of Nunavut, on recommendation of the minister, may make regulations covering all operational aspects of the Safety Act.

Boiler Board: No.

DATE OF LAW PASSAGE: 1999

Territory statute: Statutes of Territory of Nunavut, *Technical Standards and Safety Act*.

At the creation of Nunavut, on April 1, 1999, all Northwest Territories acts and regulations were adopted until Nunavut could enact its own. A new safety act, entitled *Technical Standards and Safety Act*, has been passed and will be proclaimed following revision of the regulations.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51-M1 (1991 Edition), B52-M1 (1992 Edition).
2. ASME Code (1992 Edition), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI.
3. ANSI B31.1 (1989 Edition), B31.3 (1990 Edition), B31.4 (1989 Edition), B31.5 (1989 Edition), B16.5 (1988 Edition), B61.1 (1989 Edition).
4. Manufacturers must file a copy of the *ASME Data Report* form or a data report in a format acceptable to the chief inspector for each vessel before installation.
5. Z184-M (1986 Edition), B139-M91 (1991 Edition), Z276-M (1981 Edition), Z305.1-M (1984 Edition), Z305 3-M87 (1987 Edition), Z305.4-M85 (1985 Edition), B149.1-M91 (1991 Edition), B149.2-1M91 (1991 Edition).
6. Manufacturers must submit, in duplicate, designs of boilers, pressure vessels, and fittings for approval and registration before commencing fabrication when they are to operate in Nunavut.
7. *National Building Code* (1990 Edition – Canada).
8. Shop inspections must be carried out in the United States by a *National Board Commission* holder, and in Canada by an inspector approved by the chief inspector of the province or territory where he is employed.
9. *National Board Inspection Code* (Current Edition, Current Addendum).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: A, E, H, HLW, HV, M, S, U, U2, UM, UV, V.

Boilers and pressure vessels built to CSA-ASME standards must be identified with applicable CRN for Nunavut.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All steam boilers and pressure vessels.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Boilers and pressure vessels:

1. One annual external inspection.
2. Internal inspection is at the discretion of the chief boiler inspector.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by a duly incorporated insurance company may be accepted — subject to the chief boiler inspector's recommendation — in lieu of inspections made by the department.
2. A copy of all inspection reports must be filed with the chief boiler inspector within 21 days after an inspection.
3. The chief boiler inspector must be notified of *cancellation, suspension, or rejection of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection is valid for 12 months.

TERRITORY FEES

1. Annual registration fees for boilers — depending on power rating in kilowatts — vary from \$60.00 to \$492.00 CAD.
2. Annual registration fees for pressure vessels, depending on shell diameter, vary from \$50.00 to \$100.00 CAD up to 1 meter, plus \$25.00 CAD per meter or fraction thereof.
3. Other fees as per fee schedule.

MISCELLANEOUS

1. Repairs require certified welder.
2. Operators of boilers above 100 kW for high-pressure boilers and above 750 kW for low-pressure boilers are required to be certified. Depending on the size of the boiler, operator is required to be in attendance.

OHIO



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STATE DEPARTMENT

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Express mail only:
6606 Tussing Road
Reynoldsburg, OH 43068-8230

EMPOWERMENT

The Board of Building Standards empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1912 – NEW LAW: 1965

Date of latest amendment to law: October 1969.
Date rules and regulations implemented: 1912.
Date of latest rules and regulations: April 2013.
State statute: Ohio Revised Code, Title 41. Labor and Industry, Chapter 4103. Division of Boiler Inspection, Chapter 4104.
Boilers.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition, Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2,3), IX, X, XI, and code cases.
2. Case interpretations must be approved by the Board of Building Standards.
3. ASME B31.1 (2010 Edition).
4. Manufacturers must file a copy of *Manufacturer's Data Report* on boilers and unfired pressure vessels (except cast iron) with the department through the National Board.
5. *National Board Inspection Code* (2011 Edition, Addendum).
6. National Board registration required for boilers and pressure vessels.
7. Special design or construction requires approval by the Board of Building Standards before manufacture.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

All boilers and pressure vessels must be stamped "ASME". Shop inspection of boilers and pressure vessels is mandatory.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All steam and vapor boilers, hot-water heating boilers, hot-water supply boilers (domestic hot water over 200,000 BTU per hour input), and unfired pressure vessels, except the following:

1. Boilers and unfired pressure vessels under federal control or subject to inspection under federal law.
2. Air tanks located on the vehicles operating under rules of other state authorities and used for carrying passengers or freight.
3. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
4. Unfired pressure vessels under the regulation of the state fire marshal.
5. Pressure vessels having an operating pressure not exceeding 15 psig with no limitation on size.
6. Pressure vessels not exceeding an inside diameter of 6 inches with no limitation on pressure.
7. Cylinders and containers meeting the requirements of and used in accordance with the regulations of the US Department of Transportation.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, with the following additional exceptions:

1. Portable boilers or unfired pressure vessels located on farms and used solely for agricultural purposes.
2. Steam or vapor boilers carrying a pressure of not more than 15 psig, located in private residences or in apartment houses of fewer than six family units.
3. Hot-water boilers operated at temperatures not exceeding 250°F, located in private residences or in apartment houses of fewer than six family units.
4. Unfired pressure vessels containing only water under pressure for domestic supply purposes, including those containing air (the compression of which serves only as a cushion or airlift pumping system), when located in private residences or in apartment houses of fewer than six family units.
5. Portable boilers used in pumping, heating, steaming, and drilling (open field) for water, gas and oil.
6. Portable boilers used in construction of and repair to public roads, railroads, and bridges.

INSPECTIONS REQUIRED

Item	Internal	External
Power boilers and high-pressure, high-temperature water boilers	1 Year	1 Year*
Low-pressure boilers	3 Years	1 Year*
Process boilers	3 Years	3 Years*

*Under operating conditions.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors of authorized insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector. Reports of inspections must be filed with the department within 30 days.
2. The department must be notified of suspension of insurance on account of dangerous conditions on forms supplied by the department.
3. The department must be notified of new business and discontinuance of insurance on forms provided by the department.

CERTIFICATE OF INSPECTION

Certificate of Operation is issued, when approved, by the department for a fee of \$50.00 for boilers subject to annual inspections, \$100.00 for boilers subject to biennial inspections, and \$150.00 for boilers subject to triennial inspections. There is an additional \$3.25 fee for each certificate issued.

STATE FEES

None.

MISCELLANEOUS

1. *Reciprocal Commission* may be issued, to inspectors regularly employed by an authorized insurance company, a state, or a municipal corporation having an established and authorized boiler and unfired pressure vessel inspection department. They must hold a state or municipal Certificate of Competency and have passed a written examination approved by the Board of Building Standards. Application to the department should be on forms provided by the department. One copy of the National Board Commission should accompany each application. A fee of \$10.00 is required for each inspector's application.
2. Operators of steam boilers over 30 hp are required to be licensed.

OKLAHOMA



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STATE DEPARTMENT

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Department of Labor
Safety Standards Division
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Oklahoma City, OK 73105

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Email — tommy.granneman@labor.ok.gov
Fax — 405.521.6025

EMPOWERMENT

Commissioner of Labor empowered to make, alter, adopt and amend rules and regulations for the safe construction, installation, inspection, operation and maintenance and repair of boilers and pressure vessels.

DATE OF LAW PASSAGE: 1921

Date of latest amendment to law: 2011.
Date rules and regulations implemented: 1982.
Date of latest rules and regulations: 2011.
State statute: Oklahoma State Statutes, Title 40. Labor, *Oklahoma Boiler and Pressure Vessel Law*, Sections 141.0 through 141.20 and Administrative Rules 380:25.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current edition and addendum), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX.
2. ASME CSD-1 (Current edition and addendum).
3. ANSI B31.1 (Current edition and addendum).
4. Manufacturers may file a copy of *Manufacturer's Data Report* with the department on ASME forms before installation.
5. *National Board Inspection Code* (Current edition and addendum).
6. Boilers and pressure vessels must be shop-inspected by an inspector holding a *National Board Commission*.
7. API-510 (Current edition and addendum).
8. Special design or construction requires prior approval of the Commissioner of Labor and Chief Boiler Inspector.
9. Containers for storage of liquefied petroleum gas are covered under a separate law and must be shop-inspected subject to the rules of Oklahoma Liquefied Petroleum Gas Administration.

Stamping:

Where appropriate, the following National Board stamps or ASME Code Certification Marks with appropriate designators are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HV, M, PP, S, U, U2, U3, UM, UV, V.

All boilers and pressure vessels subject to the act shall be marked with an Oklahoma serial number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

1. All boilers within the scope of Section I of the ASME Code.
2. All boilers within the scope of Section IV of the ASME Code.
3. All pressure vessels within the scope of Section VIII (Divisions 1, 2, 3) of the ASME Code and downstream welded steam piping exceeding 15 psi, except the following:
 - a. Boilers and pressure vessels under jurisdiction of federal government;
 - b. Pressure vessels used for transportation of compressed gases (if constructed in accordance with the US Department of Transportation or Oklahoma Corporation Commission), or containers for liquefied petroleum gases (subject to the US Department of Transportation or Oklahoma Liquefied Petroleum Gas Administration);
 - c. Pressure vessels containing air located on vehicles operating pursuant to regulations of other jurisdictional authorities;
 - d. Boilers and pressure vessels located on railroad locomotives;
 - e. Pressure vessels on remote sites limited to oil- and natural gas-gathering facilities, processing plants or gas-producing lease locations;
 - f. Pressure vessels in the care, custody, and control of research facilities used solely for research purposes;
 - g. Pressure vessels on oil and gas lease locations.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, and hot-water supply heaters located in facilities or installations owned or operated by the State of Oklahoma, or its agencies, counties, municipalities, or school districts, except the following:

1. Pressure vessels not exceeding 15 cubic feet in volume and 250 psig.
2. Low-pressure steam boilers, hot-water heating boilers, hot-water supply boilers, hot-water supply heaters, or pressure vessels located in private residences or in apartment houses of fewer than six family units.
3. Pressure vessels operated full of water or other liquid (not materially more hazardous than water), provided the vessel contents do not exceed a temperature of 150°F or a pressure of 200 psig.

INSPECTIONS REQUIRED

Item	Internal	External	
Power boilers and high-temperature, high-pressure boilers	1 Year	1 Year*	*Under pressure.
Low-pressure steam and vapor heating boilers	2 Years	1 Year	**At the discretion of the inspector.
Hot-water heating and hot-water supply boilers	**	1 Year	***Only those located in public facilities.
Hot-water supply heaters	***	2 Years	<i>Vessels within the scope of the API Inspection Code shall be inspected as prescribed therein.</i>
Pressure vessels, excluding those within the scope of API Inspection Code, subject to internal corrosion, and waste heat steam generators	3 Years	3 Years	
Pressure vessels not subject to internal corrosion	10 Years	3 Years	<i>Downstream welded steam piping exceeding 15 psi requires inspection.</i>

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by insurance company inspectors may be accepted in lieu of inspections made by a department inspector, provided a photostatic copy of the inspector's *National Board Certificate* is furnished to the department and the inspector is authorized by the commissioner of labor.
2. Exact copies of inspector's field reports must be filed with the department within 30 days.
3. The department must be notified immediately regarding the *suspension of insurance on account of dangerous conditions*.
4. The department must be notified of *new business* and *discontinuance of insurance* within 30 days.

CERTIFICATE OF INSPECTION

Certificate of Inspection is valid for 12 months for boilers and 36 months for pressure vessels and issued by the commissioner upon payment of a \$25.00, \$50.00 or \$75.00 fee. Fee shall be paid directly to the department of labor.

STATE FEES

Annual *Certificate of Operation* fees:

1. Boilers and pressure vessels with manway, state inspector - **\$75.00**
2. Boilers and pressure vessels without manway, state inspector - **\$50.00**
3. Boilers and pressure vessels of any size by a special or owner/user inspector - **\$50.00**
4. Boilers and pressure vessels each public hot water supply heater (biennially) - **\$5.00**
5. Boilers and pressure vessels each public boiler inspection/certification - **\$25.00**

Only one certificate of operation fee per year may be charged; except an additional fee equal to the certificate of operation fee may be charged for witnessing a hydrostatic test required after repairs, provided a fee equal to the total fees identified in division (1) or (2) of subparagraph "a" of this paragraph, whichever is appropriate, and subparagraph "f" of paragraph 2 of this subsection may be charged when the pressure-retaining item is not prepared and ready pursuant to rules promulgated by the Commissioner of Labor at the time of the inspection.

Other fees:

1. Shop review - **\$3,000.00**
2. Licensing
 - a. Repair, service, or install (annual) - **\$50.00**
 - b. Boiler operator (biennial) - **\$50.00**
3. *Certificate of Competency* - **\$15.00**
4. Examination fee - **\$50.00**
5. Certificate inspection by state inspector - **\$155.00**
6. Duplicate licenses and certificates - **\$10.00**
7. Authorized inspector services for weld repairs or alterations, per eight-hour day or part thereof - **\$300.00**
8. Hydrostatic test of steam pipeline
 - a. Per day - **\$150.00**
 - b. Each additional half-day or part thereof - **\$75.00**

Fees must be paid by owner/user before a Certificate of Operation will be issued by the commissioner.

MISCELLANEOUS

1. The *National Board Inspection Code* or the *American Petroleum Institute Inspection Code*, as applicable, have been adopted by the department, and all repairs by fusion welding must be approved by an authorized inspector.
2. For repairs by fusion welding of steam lines carrying more than 15 psi (past the stop valve required by the ASME Code), the welder qualification test must be witnessed by an authorized testing laboratory qualified to conduct such tests in accordance with Oklahoma State Statutes, Title 59.
3. Welders in the employment of a firm which is a qualified holder of a National Board "R" stamp may make repairs to boilers after passing a welding or welding operator performance test.
4. All welded steam piping past the boiler's stop valves must be of proper material and of sufficient strength for maximum pressure and temperature of the installation, and conform to accepted practice in accordance with appropriate ANSI standard.
5. All welds must be stamped with the welder's designated number or symbol. A record of welded repairs must then be filed with Department of Labor.
6. All firms or corporations engaged in service, repair, or installation of boilers and pressure vessels must be licensed, for an annual fee of \$50.00 (hot-water supply heaters in publicly owned or operated installations exempted).
7. *Reciprocal Commission* will be granted to inspectors holding a *National Board Commission* upon request to the Commissioner of Labor accompanied by a photostatic copy of the applicant's *National Board Commission* and fee of \$15.00. Commissions must be renewed annually for a fee of \$15.00.
8. Effective October 1, 1995, all new applicants for and current holders of the Oklahoma *Certificate of Competency* will be required to complete an open-book questionnaire covering the *Oklahoma Boiler and Pressure Vessel Safety Act* of 1982 and its amendments, prior to the issuance or renewal of the *Certificate of Competency*.
 - a. This questionnaire will be required every five years;

- b. Each new applicant for a *Certificate of Competency* will be provided the questionnaire at the time of application;
 - c. Future questionnaires will be provided on or before October 1 of each year to satisfy the five-year requirement.
9. Firms, partnerships, or corporations operating boilers or pressure vessels may seek approval and registration as an owner/user inspection agency by filing an application with the chief boiler inspector and requesting the commissioner's approval.
 10. A copy of the boiler and pressure vessel rules and regulations may be obtained by contacting the director/chief boiler inspector's office or at the Department of Labor Web site. Cost: free.
 11. Non-mandatory State Boiler Operator licensing program is available.

OMAHA, NEBRASKA

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MUNICIPAL DEPARTMENT

Thomas E. Phipps, Chief Mechanical Inspector
Planning, Permits and Inspections Division
1819 Farnam Street, Room 1110
Omaha, Nebraska 68183

Telephone — 402.444.5350, Ext. 2131
Email — tom.phipps@ci.omaha.ne.us
Fax — 402.444.5233
Cell — 402.699.9895

EMPOWERMENT

The City Council and Building Board of Review empowered to make, alter, or amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1921

Date of latest amendment to law: January 2014
Date rules and regulations implemented: January 1921
Date of latest rules and regulations: January 2014

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code 2013 Editions , Sections I, IV, V, VIII (Divisions 1, 2, 3), IX, X, ASME Code and case interpretations when accepted by the Chief Boiler Inspector of the State of Nebraska.
2. ASME B31.1 (2012 Edition).
3. ASME B31.3 (2012 Edition).
4. ASME B31.5 (2013 Edition).
5. ASME B31.9 (2011 Edition).
6. CSD-1 (2012 Edition).
7. NFPA 54 (2012 Edition).
8. NFPA 58 (2014 Edition).
9. NFPA 85B (2011 Edition).
10. IMC 2012 (with local amendments).
11. Installer must file copy of *Manufacturer's Data Report* and CSD-1 Report with department upon installation.
12. *National Board Inspection Code* (2013 Edition).
13. National Board registration required for boilers and pressure vessels.
14. Special design or construction must be approved by State of Nebraska.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, S, U, U2, U3, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers under federal jurisdiction and control.

2. Boilers of railway locomotives subject to federal inspection.
3. Boilers named as "does not apply to" in the *Nebraska Boiler Inspection Act*.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Same as inspections required by the *Nebraska Boiler Inspection Act*.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Inspection reports must be filed with the department on State of Nebraska forms within 15 days after inspection.
3. The department must be notified:
 - a. When insurance is suspended because of dangerous conditions;
 - b. When insurance on a vessel is discontinued.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 months for boilers and 12 months for unfired pressure vessels, is issued by the department upon payment of inspection fee by owner/user or a \$10.00 fee for an insurance company.

MUNICIPAL FEES

1. External inspection only, under operation, any boiler - **\$35.00**
2. Miniature boilers, over 15 psi - **\$35.00**
3. Vertical Boilers:
 - a. Under 20 hp - **\$55.00**
 - b. 20 hp or over - **\$65.00**
 - c. Horizontal tubular boilers, all types - **\$65.00**
4. Watertube Boilers:
 - a. Under 201 sq. ft. heating surface - **\$35.00**
 - b. 201 to 3,500 sq. ft. heating surface - **\$65.00**
 - c. 3,501 sq. ft heating surface and up - **\$135.00**
5. Firebox, marine locomotive boilers:
 - a. Under 501 sq. ft. heating surface - **\$55.00**
 - b. 501 sq. ft. heating surface and up - **\$65.00**
6. Cast-iron sectional boilers, 1,000 feet radiation and over - **\$35.00**
7. Retorts, vulcanizers, and vessels for cooking or other processes under pressure of capacity of 75 gallons or over - **\$25.00**
8. Pressure tanks used as containers for water, air, steam, or other gases - **\$25.00**

MISCELLANEOUS

1. Each insurance inspector must have a current National Board Commission, current State of Nebraska Commission City of Omaha Commission, and post a \$3,000 bond.
2. City of Omaha requires all boilers to have duty operators holding a certificate of the proper grade, except for the following:
 - a. Heating plants used for heating a private dwelling;
 - b. All plants having a pressure not exceeding 15 psi steam and not exceeding 750 sq. ft. of boiler heating surface;

- c. All steam plants over 15 psi under 500 sq. ft. heating surface;
 - d. Hot-water heating plants not exceeding 1,000 sq. ft. heating surface.
3. City of Omaha gives an operator exam on the first Thursday of each month.
 4. Permits are required to install boilers.
 5. Permits are required to relocate boilers.

ONTARIO



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PROVINCIAL DEPARTMENT

Michael J. Adams
Director, Boiler & Pressure Vessels/Operating Engineers
Technical Standards & Safety Authority
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Canada

Telephone — 416.734.3535
Email — madams@tssa.org
Fax — 416.231.6183

EMPOWERMENT

Director empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1900

Date of latest amendment to law: March 2000.
Date rules and regulations implemented: 1913.
Date of latest rules and regulations: September 2001.
Provincial statute: Statutes of Ontario, Technical Standards and Safety Act, Chapter 16. Ontario Regulations, Chapter 223. *Boilers and Pressure Vessels* (220/01), codes and standards adopted by reference.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 (2009 Edition, including update Number 1 - March 2009), B52-05 (2009 Edition, including B52 S1-09 Supplement No. 1), N285.0-12 / N285.6 Series 12.
2. ASME Code (Current Edition), Sections I, II, III, IV, V, VIII (Divisions 1, 2, 3), IX, X, XII, and code cases.
3. ASME B31.1 (Current Edition), B31.3 (Current Edition), B31.5 (Current Edition).
4. ASME PVHO-1 (Current Edition).
5. Manufacturers must file a copy of *Manufacturer's Data Report* with the Technical Standards and Safety Authority. ASME Data Report forms are required for ASME-stamped items.
6. *National Board Inspection Code* (Current Edition, Current Addendum).
7. Boilers and pressure vessels built to CSA/ASME codes in Ontario must be shop-inspected by inspector employed by the Technical Standards and Safety Authority.
8. Boilers and pressure vessels built to CSA/ASME standards outside Canada must be shop-inspected by inspector employed by an authorized inspection agency.
9. Manufacturers must submit designs and specifications for approval before commencing fabrication of any new, or alteration to any existing, boiler, pressure vessel, piping system, or fitting for installation in Ontario.
10. All designs for boilers and pressure vessels submitted for approval and registration must bear the signature and seal of a professional engineer licensed in the Province of Ontario.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).

2. ASME Code: all ASME vessels.

Boilers and pressure vessels built to CSA/ASME codes must be identified with the applicable CRN for Ontario.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. A boiler that is used in connection with a hot liquid heating system that has no valves or other obstructions to free circulation between the boiler and an expansion tank that is vented freely to the atmosphere;
2. A low pressure boiler that has either a wetted heating surface of 30 square feet or less, or a power rating of 30 RW or less;
3. A boiler having a heating surface of 10 square feet or less;
4. A pressure vessel, fitting or piping that contains a gas, vapour or liquid at a maximum allowable working pressure of 15 psi or less;
5. A pressure vessel, fitting or piping that contains liquids not more hazardous than water and that operate at a temperature of 150°F or less and at a maximum allowable working pressure of 250 psi or less;
6. A pressure vessel for domestic use that has an internal diameter of 24 inches (610 mm) or less for the storage of hot water where the temperature does not exceed 212°F and the heat input is 120 kW or less;
7. A pressure vessel that is used exclusively for hydraulic purposes at a temperature no greater than 150°F;
8. A pressure vessel that has an internal diameter of 24 inches or less that is connected in a liquid pumping system at a temperature that does not exceed 150°F and that contains air or an inert gas compressed to serve as a cushion;
9. Pressure containers that form an integral part of or that are a component of rotating or reciprocating mechanical devices, including pumps, compressors, turbines, generators, engines and hydraulic or pneumatic cylinders where the primary design considerations or stresses, or both, are derived from the functional requirements of the device;
10. Automatic fire protection systems that are designed and installed in accordance with Ontario Regulation 403/97 (The Building Code) and Ontario Regulation 388/97 (Fire Code);
11. Any component or system related to the subject matter of this Regulation that is regulated under any Act or regulation of the Government of Canada unless specifically requested otherwise by the Government of Canada;
12. A pressure vessel having a capacity of 1 and one-half (1½) cubic feet or less, that is not a fitting;
13. A pressure vessel having an internal diameter of six (6) inches or less.
14. A boiler, pressure vessel or piping used exclusively for agricultural purposes.
15. Inert gas filled, high voltage switchgear and control gear with maximum internal pressure of 150psi and rated 15kW and above, located within an electric utility installation with controlled access for maintenance and repair, not accessible to the public.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

PRESSURE PIPING FABRICATION AND INSTALLATION

All pressure piping requires design registration and inspection, except the following:

1. Refrigeration piping that has a capacity of three tons or less of refrigeration or five tons or less of air conditioning;
2. Pressure piping that forms part of the heating system in a building that is,
 - a. Heated by steam at a pressure not exceeding 15 psi or
 - b. Heated by water at a pressure not exceeding 160 psi and at a temperature that does not exceed 250°F;
3. Compressed air piping, up to and including ¾ inch nominal pipe size;
4. Hot oil piping, where the pressure is not greater than 100 psi and the operating temperature is not less than 50°F lower than the flash point of the oil;
5. Buried water piping that operates at a temperature of 150°F or less at a maximum allowable working pressure of 600 psi,
6. Flexible hoses and portable air piping used in mines.

Piping fabricators and installers must hold a *Provincial Certificate of Authorization* to perform work.

INSPECTIONS REQUIRED

Periodic inservice inspections are required at the intervals prescribed in the code adoption document.

INSURANCE INSPECTION REQUIREMENTS

1. Insurance companies shall be licensed under *Insurance Act* to undertake boiler and machinery insurance in Ontario.
2. Insurance companies are required to perform periodic inspections on objects they insure and may perform repair inspections on objects they insure.
3. Copy of report of inspection from the insurer must be filed with Technical Standards and Safety Authority within 21 days.
4. Technical Standards Safety Authority must be notified forthwith of *suspension of insurance on account of dangerous conditions*.
5. Technical Standards Safety Authority must be notified forthwith of *new business and discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for 12 to 36 months as applicable.

PROVINCIAL FEES

In accordance with the *Table of Fees* posted on the Web site at www.tssa.org.

MISCELLANEOUS

1. All repairs to boilers, pressure vessels, fittings, and piping systems must be approved by an inspector appointed under the act.
2. Either a *Provincial Certificate of Authorization* or National Board "R" Stamp is required to perform repairs to boilers, pressure vessels, or piping.
3. Operators of boilers, compressors, refrigeration plants, turbines and other pressure equipment may be subject to registration in accordance with the *Operating Engineers Regulation*.

OREGON



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STATE DEPARTMENT

Mark K. Perdue, Chief Boiler Inspector
Department of Consumer and Business Services
Building Codes Division
Boiler and Pressure Vessel Group
P.O. Box 14470
Salem, OR 97309-0404

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Express mail only:
1535 Edgewater, N.W.
Salem, OR 97304-4635

EMPOWERMENT

Board of Boiler Rules empowered to make, alter, or amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1920

Date of latest amendment to law: September 2014.
Date rules and regulations implemented: 1920.
Date of latest rules and regulations: December 2013.
State statute: Oregon Revised Statutes, Volume 11, Title 38. Protection from Fire, Chapter 480. *Explosives, Flammable Materials, Pressure Vessels*, Sections 510 through 990.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2013 Edition), Sections I, II, IV, V, VIII (Divisions 1, 2, 3), IX, X
2. ASME CSD-1 (2012 Edition).
3. ASME B31.1 (2012 Edition), B31.3 (2012 Edition), B31.5 (2013 Edition), and B31.9 (2011 Edition).
4. *Manufacturer's Data Report* for UM vessels must be submitted to chief boiler inspector when *Operating Permit* for the vessel is required.
5. *National Board Inspection Code* (2013 Edition).
6. National Board registration required for boilers and pressure vessels.
7. NFPA 85 (2011 Edition).
8. Special design requires approval of chief boiler inspector.
9. Pressure piping, consisting of boiler and non-boiler external piping connected to a boiler, but not potable water non-boiler external piping, is considered part of the boiler and shall be inspected during fabrication, installation, when altered, or when adding new feeder lines.
10. Foreign codes: CSA B51, British Standards Institute, European Committee for Standardization or SNCT. Copy of the *Manufacturer's Data Report* or other similar document to be forwarded to the chief boiler inspector.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, H, HLW, PP, S, U, U2, U3, UM, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under federal control.
2. Domestic water heaters designed for heating potable water, equipped with approved pressure-relieving device, containing only water and not exceeding:
 - a. Capacity of 120 gallons;
 - b. Water temperature of 210°F;
 - c. Pressure of 150 psig;
 - d. Heat input of 200,000 BTU per hour.
3. Pressure vessels containing liquefied petroleum gas under the jurisdiction of the state fire marshal. (Exception: The construction and repair of such vessels shall be in compliance with the boiler law.)
4. Air tanks used in the operation of brakes on self-propelled vehicles and trailers used for transportation of freight or passengers.
5. Medical sterilizers not exceeding 1-1/2 cubic feet in volume.
6. Pressure vessels not exceeding 5 cubic feet in volume which are not operated at gage pressure of more than 150 psi, equipped with a relief valve, approved under ASME Code, adopted by the board and set at a maximum pressure of 150 psi.
7. The following boilers and pressure vessels are exempt from Oregon Boiler Law, except provisions relating to construction, installation, inspection, and fees:
 - a. Boilers operated at less than 15 psig located on farms and used solely for agricultural purposes, except when used in connection with a greenhouse.
 - b. Air tanks located on farms used solely for agricultural purposes.
 - c. Boilers or pressure vessels used in a single private residence shall have an installation inspection and be provided with a permit to operate, but shall be exempt from subsequent inspection required in the boiler law, except changes or repairs made.
 - d. Pressure vessels operated at less than 15 psig.
 - e. Certain miniature boilers (see 918-225-365 of the Oregon Administrative Rules).

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Each boiler and pressure vessel used or proposed to be used within the state, except as exempted under ORS 480.510 to 480.665 or by administrative rule, shall be thoroughly inspected as to its construction, installation, operation, and condition as follows:

Item	Internal	External	
Power Boilers	1 Year	1 Year*	*Both under pressure and not under pressure.
Low-pressure steam and vapor-heating boilers	2 Years	2 Years**	
Cast-iron boilers	—	2 Years	**Under pressure.
Low-pressure hot-water heating and hot-water supply boilers	6 Years	2 Years	<i>Hydrostatic test when deemed necessary to determine the safety of a boiler or pressure vessel shall be made by</i>
Pressure vessels subject to internal corrosion	2 Years	2 Years	
Pressure vessels not subject to internal corrosion	—	2 Years	
Pressure vessels containing anhydrous ammonia intended for use as a fertilizer	—	3 Years	
Pressure vessels: Fixed, containing only air, not located at a place of public assembly, less than 20 cubic feet in volume, operated at 200	—	6 Years	

psig or less		the owner/user and witnessed by
Steam and hot-water non-boiler external piping	Inspected upon installation	

a deputy or special inspector.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by special boiler inspectors holding a valid Oregon *Certificate of Competency* from the Building Codes Division and continuously employed by insurance companies authorized to write, boiler and machinery insurance in the state are accepted in lieu of inspections made by a deputy boiler inspector.
2. Reports of inspection must be filed with chief boiler inspector on forms acceptable to the Building Codes Division within 30 days.
3. Building Codes Division must be notified of *new business, suspension, or discontinuance of insurance* on acceptable forms.

CERTIFICATE OF INSPECTION

Operating Permit, valid for period prescribed in the law, will be issued by the Building Codes Division to the owner/user of a vessel inspected by an authorized insurance inspector, upon receipt of the appropriate permit fee paid by the owner/user directly to the Boiler and Pressure Vessel Group, Building Codes Division (see below).

STATE FEES (All fees listed are subject to 12% surcharge)

Effective July 1, 2009 — under ORS 480.595(3) and 480.607 — permit fees, including inspection fees, shall be:

1. Boiler one-year operating permit, power boilers - **\$110.00**
2. Boiler two-year operating permit, all other boilers - **\$110.00**
3. Pressure vessel two-year operating permit - **\$100.00**
4. Pressure vessel five-year operating permit - **\$100.00**
5. Reinspection provided in ORS 480.595(4) shall be charged at the rate of \$75.00 per hour for travel and inspection time (to defray cost of reinspection) when deviations from the minimum safety standards are found during any inspection.
6. Fee for special permit set out in ORS 480.600(2) - **\$27.50**
7. In addition to fees shown in sections (1) thru (4) of this rule, there is a statutory surcharge of 12% on permit fees
8. Miscellaneous fees under ORS 480.605:
 - a. Fees for shop inspection service provided in ORS 480.605(l) and witnessing hydrostatic or other tests under ORS 480.605(3) are:
 - i. Hourly charge for travel and inspection - **\$75.00**
(plus 12% surcharge)
 - ii. Hourly charge for travel and inspection before 8:00 a.m., after 5:00 p.m., on weekends and holidays - **\$112.50**
(plus 12% surcharge)
 - b. In addition to the hourly charge, actual costs of meals and lodging are also charged.

MISCELLANEOUS

1. *Certificate of Competency* examination covering Oregon Laws, CSD-1 and *National Board Inspection Code* is required for initial certificate with annual renewal. A \$110.00 fee is charged for the initial issue. Renewal fee is \$27.50.
2. Pressure vessels containing liquefied petroleum gas come under jurisdiction of the state fire marshal. Exception: Construction and repair of these vessels shall be in compliance with ORS 480.510 to 480.665 and be under the jurisdiction of the board.
3. *Boiler and Pressure Vessel Rules and Regulations* may be viewed online at www.bcd.oregon.gov.

PENNSYLVANIA



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STATE DEPARTMENT

Nathaniel Smith, Boiler Inspector Director
Department of Labor and Industry
Boiler Section
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Harrisburg, PA 17121

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EMPOWERMENT

The Department of Labor and Industry empowered to make, alter, or amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1929

Date of latest amendment to law: Nov 2013.
Date rules and regulations implemented: 1929.
Date of latest rules and regulations: February 2006.
State statute: The Pennsylvania Code, No. 104, *Boiler and Unfired Pressure Vessel Law*, Sections 1 through 17.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition, 2011 Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VIII (Divisions 1, 2, 3), IX, X, XI.
2. *Manufacturer's Data Report* on boilers and pressure vessels (unless otherwise exempted by rules and regulations) must be provided to inspector at time of inspection.
3. *National Board Inspection Code* (2011 Edition, 2011 Addendum).
4. National Board registration required for boilers and pressure vessels.
5. Special design or construction requires approval by the boiler section.
6. Shop inspections must be made by inspectors holding a valid *National Board Commission*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, NV, PP, S, U, U2, U3, UM, UV, V.

Boilers and pressure vessels must be stamped ASME and National Board registered.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels owned or operated by the federal government.
2. Boilers and unfired pressure vessels regulated under *Atomic Energy Act of 1954*.

3. Boilers used on farms, except where exposed to the public.
4. Pressure vessels used for transportation of compressed gases if constructed and operated in compliance with specifications and regulations of US Department of Transportation.
5. Air tanks located on vehicles (used for carrying passengers or freight) operating under rules of other commonwealth agencies.
6. Air tanks installed on the right-of-way of railroads (under federal or other commonwealth agency jurisdiction) used directly in the operation of switches and signals.
7. Boilers located in single-family dwellings or multi-unit dwellings with four or fewer units.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Item	Field Inspection
Power boilers, internal and external	1 Year
Miniature boilers	1 Year
Low-pressure steam vapor, hot-water heating and hot-water supply boilers	2 Years
Unfired pressure vessels	3 Years

Nuclear vessels: Type and frequency of inspection will be determined by the chief inspector.

1. Power boiler internal inspections may be extended to 24 months if:
 - a. Boiler water treatment is continuously under direct supervision of trained personnel.
 - b. Recordkeeping shows date and time boiler out of service and why, and water condition based on daily sample analysis (illustrating elements which may cause corrosion).
 - c. External inspections are performed by a commonwealth-commissioned inspector.
 - d. Boiler is operated under direct supervision of qualified persons, and inspection records demonstrate no significant scaling, corrosion, or overheating.
2. Process boiler internal inspections may be extended to 60 months if meeting the above criteria plus being in continuous operation and fully attended.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors of authorized insurance companies and companies operating vessels in Pennsylvania who have been commissioned by the section are accepted in lieu of inspections made by a boiler section inspector.
2. Any person, firm, partnership or corporation operating boilers or pressure vessels in the commonwealth may seek approval and registration as an owner/user inspection agency through the Department of Labor and Industry.

CERTIFICATE OF INSPECTION

Certificate of Operation, when approved, is issued by the boiler section for boilers and pressure vessels upon payment of the following fees:

1. Boilers, for a period of 12–24 months, by law - **\$22.00** per year
2. Pressure vessels, for a period of 36 months - **\$22.00** per year

STATE FEES

1. Power, high-temperature, high-pressure and miniature boilers — internal:
 - a. 50 square feet heating surface and less - **\$22.00**
 - b. More than 50 square feet heating surface and less than 4,000 square feet - **\$36.00**
 - c. More than 4,000 square feet heating surface and less than 10,000 square feet - **\$51.00**
 - d. More than 10,000 square feet heating surface - **\$58.00**
 - e. Miniature boilers - **\$15.00**
2. Power, high-temperature, high-pressure, and miniature boilers — external:
 - a. 50 square feet heating surface and less - **\$15.00**

b. More than 50 square feet heating surface and less than 4,000 square feet - **\$36.00**

3. Low-pressure boilers:

a. Heating boilers without manhole - **\$18.00**

b. Heating boilers with manhole - **\$22.00**

c. Hot-water supply boilers - **\$15.00**

4. Pressure vessels:

a. 50-square-foot cross-sectional area or less - **\$15.00**

b. Each additional 100 square feet of cross-sectional area - **\$15.00**

5. Hydrostatic test (witnessed) - **\$22.00**

Not more than \$50.00 shall be paid for the inspection of any one vessel. A group of vessels, such as the drying rolls of a paper machine operating as a unit, shall be considered one pressure vessel.

MISCELLANEOUS

1. A *Reciprocal Commission* may be issued to qualified inspectors in the employ of any state or authorized insurance company passing the Pennsylvania examination. Application shall be in writing on a department form and accompanied by a \$44.00 fee.
2. Inspector credential cards shall be renewed each year upon application by respective employers and accompanied by an annual \$15.00 renewal fee.
3. Operators of boilers and pressure vessels are required to be licensed by local option.
4. Requirements for liquefied petroleum gas tanks and cylinders are covered under separate regulations of the department.
5. Requirements for flammable and combustible liquids are covered under separate law and regulations of the department.
6. Antique boilers are inspected under the *Antique Boiler Law*.
7. Compressed natural gas fueling facilities are covered under separate regulations of the department.

PRINCE EDWARD ISLAND



IMPORTANT NOTICE: Every effort has been made to make this synopsis as accurate and complete as possible. However, jurisdictional laws, regulations and rules are subject to change without notice. As a result, the information contained herein is neither guaranteed nor warranted. User is advised to consult the jurisdiction's chief inspector before reaching any decision that may have critical impact or significant financial consequences.

PROVINCIAL DEPARTMENT

Steven Townsend, Chief Boiler Inspector
Department of Communities, Land and Environment
P.O. Box 2000
31 Gordon Drive
Charlottetown, Prince Edward Island C1A 7N8
Canada

Telephone — 902.368.5567
Email — srtownsend@gov.pe.ca
Fax — 902.368.5526

Express mail only:
J. Elmer Blanchard Building
31 Gordon Drive
Charlottetown, Prince Edward Island
C1A 6B8 Canada

EMPOWERMENT

Lieutenant governor-in-council empowered to make regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1948

Date of latest amendment to law: October 2012.
Date rules and regulations implemented: 1948.
Date of latest rules and regulations: November 2015.
Provincial statute: Statutes of Prince Edward Island, Chapter B-5. *Boilers and Pressure Vessels Act*, Sections 1 through 34.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. In Canada:
 - a. CSA B51 (Current edition), B52 (Current edition), B-139 (Current edition), B-140 (Current edition), Z-305.1 (Current edition), CGA B-149.1 (Current edition), CGA B 149.2 (Current edition);
 - b. ASME Code (Current edition, Current addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI;*
 - c. ANSI B31.1 (Current edition), B31.2 (Current edition), B31.3 (Current edition), B31.4 (Current edition), B31.5 (Current edition);
 - d. *National Board Inspection Code* (Current edition, Current addendum).

*Any addenda to the code or standards and any interpretations, rulings, or cases issued by ASME shall be deemed to be adopted upon publication when approved by the advisory board.

2. Outside Canada: as above, plus ASME Code symbol stamp and National Board registration.
 - a. Manufacturers must file a *Manufacturer's Data Report* (ASME or CSA) for each boiler or pressure vessel installed in the province. Forms and nameplate stamping shall include CRN of the design to which unit was constructed;
 - b. Special design or construction requires approval and registration by the chief inspector;
 - c. Manufacturers must submit designs and specifications in duplicate to the Boiler and Pressure Vessel

Division for approval and registration before commencing fabrication of any boiler, pressure vessel, or pressure piping system for installation in the province;

- d. Manufacturers of valves, fittings, and similar pressure-retaining components must submit for approval and registration properly executed *Statutory Declaration* forms along with two copies of the catalogs or brochures detailing the products for which registration is sought. When component is a pressure-relieving device, rating sheets from *The National Board of Boiler and Pressure Vessel Inspectors* shall be included. *Statutory Declaration* forms are available from the province on request;
- e. All boilers, pressure vessels, and fittings installed after adoption of these regulations shall be constructed to a registered design.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R (accepted), VR.
2. ASME Code: H, HLW, HV, M, N, NA, NPT, NV, S, U, U2, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, pressure vessels, pressure plants, and pressure piping systems as provided for in the *Boilers and Pressure Vessels Act* and defined in the regulations, except:

1. Power boilers having a rating of 10 kW per hour or less.
2. Heating boilers having a rating of 20 kW per hour or less.
3. Boilers fully vented to the atmosphere.
4. Pressure vessels 6 inches or less in internal diameter (considered a fitting if operated above 15 psi).
5. Pressure vessels used for hot-water storage when diameter is 24 inches or less.
6. Pressure vessels operating at and with relief valves set at 15 psi.
7. Pressure vessel used for a cushion tank in a closed, hot-water heating system when pressure is 30 psi or less and diameter is 24 inches or less.
8. Refrigerating systems having a capacity of 10.5 kW.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

One inspection before use and periodically thereafter. Normally:

1. One annual external inspection.
2. One annual internal inspection where service warrants.

Before initial operation, every new or secondhand boiler or pressure vessel must be inspected and have an inspection certificate issued by the inspector.

INSURANCE INSPECTION REQUIREMENTS

For the purpose of issuing a *Certificate of Inspection*, the chief inspector may accept a report submitted by a person regularly employed by an insurance company (licensed under the insurance act) and may issue a *Certificate of Inspection* based on that report.

CERTIFICATE OF INSPECTION

Certificate of Inspection issued by an inspector authorizes the operation or use of a boiler, pressure vessel, or pressure plant from date of the certificate (unless withdrawn or canceled by the inspector).

PROVINCIAL FEES

1. Fees for design registration and shop inspections:
 - a. Boiler and pressure vessel design registration (depending on diameter and nature of design) - **\$300.00 CAD**
 - b. Fittings registration (depending on quantity) - **\$165.00 to \$300.00 CAD**

- c. Pressure piping design registration (depending on plant rating) - **\$75.00 to \$240.00 CAD**
 - d. Larger systems (per 300 feet) - **\$85.00 CAD**
 - e. Minimum - **\$170.00 CAD**
 - f. Shop inspection per hour - **\$100.00 CAD**
 - g. Welder certification per hour - **100.00 CAD**
2. Fees for initial and periodic inspection:
- a. Boilers (depending on size) - **\$75.00 to \$600.00 CAD**
 - b. Pressure vessels (depending on size) - **\$45.00 to \$175.00 CAD**

MISCELLANEOUS

- 1. National Board registration required for boilers and pressure vessels manufactured outside Canada.
- 2. Repairs by fusion welding must be performed by welders qualified in accordance with ASME Code Section IX.
- 3. Welders' tests are conducted by the Boiler and Pressure Vessel Division. All welders must be retested annually.
- 4. A permit is required to make major repairs to a boiler, pressure vessel, or pressure piping system.
- 5. All propane gas systems must be inspected by an inspector prior to filling.
- 6. Medical gas piping is included within the scope of the *Boiler and Pressure Vessel Act*.
- 7. Operator's license is required to operate boilers above 439.5 kW's.
- 8. A copy of the jurisdictional laws, rules and regulations may be obtained through:

Island Information Services
P.O. Box 2000
Charlottetown, PE
C1A 7N8 Canada

or at www.gov.pe.ca.

PUERTO RICO

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COMMONWEALTH DEPARTMENT

Edgar Hernandez, Person of contact
Commonwealth of Puerto Rico
Department of Labor and Human Resources
P.R. Occupational Safety and Health Administration (PR OSHA)
Boiler and Elevator Division
505 Muñoz Rivera Avenue
Hato Rey, Puerto Rico 00918

Telephone — 787.754.2172 Ext 3335
Email — Ascal.pr@dol.gov
Fax — 787.767.6051

Mailing Address:
PO Box 195540
San Juan, PR 00919-5540

EMPOWERMENT

The Secretary of Labor and Human Resources of the Commonwealth of Puerto Rico empowered to make, alter, or amend rules and regulations.

Boilers & Pressure Vessels Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: Law# 112,1939 – Regulation 17, 2004

Date of latest amendment to law: Special Rule #1- August, 1976.

Date rules and regulations implemented: November, 1976.

Date of latest rules and regulations: April 2004

State statute: Regulation Number 17 of the Office of the Assistant Secretary for Occupational Safety & Health, Regulation of Boilers and Pressure Vessels

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
2. Code addenda and case interpretations accepted automatically.
3. ASME CSD-1 (Current edition).
4. Owner must submit an Installation Permit Application to the PROSHA before installing a boiler.
5. Any natural or legal person interested in obtaining a registration from the Department of Labor to manufacture, install, alter, or repair boilers, pressure vessels, or safety valves must file the corresponding application with the Secretary.
6. *National Board Inspection Code* (Technical portions of the most recent edition).
7. NFPA (85 Series for automatically fired boilers).
8. Special design or construction requires approval of the Secretary of Labor and Human Resources.
9. In the event of a discrepancy between any code and *Regulation Number 17*, the provisions of *Regulation Number 17* prevail.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except definitions and exemptions as established by ASME Code.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Boilers and Pressure Vessels:

1. One annual internal;
2. One annual external and operational.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections are made by private inspectors and inspectors employed by insurance companies authorized by the Secretary of Labor and Human Resources. (Department of Labor and Human Resources does not make inspections).
2. Inspectors are required to submit a monthly report to the department.

CERTIFICATE OF INSPECTION

Certificates must be posted in boiler rooms near the equipment.

COMMONWEALTH FEES

1. Registration of equipment - **\$5.00**
2. Control Number for Registration Certificate - **\$1.00**
3. Installation permit application - **\$50.00**
4. Application for license examination - **\$100.00**
5. License renewal - **\$50.00**
6. Registry application - **\$10.00**

The payments for these services will be made through check or money order in the name of the Secretary of the Commonwealth Treasury Department.

MISCELLANEOUS

1. Boiler inspectors must not have any interest or connection with the firm owning or operating the boiler or pressure vessel to be inspected.
2. Examinations for a boiler and pressure vessel inspector's license are held by the Department of Labor at least once a year.
3. Owner is responsible for the operator's knowledge of equipment.
4. ANSI/API 510 (American Petroleum Institute Pressure Vessel Code) also accepted where applied.
5. Contact the Assistant Secretary of PR OSHA at 787.754.2172 with any questions.

QUÉBEC



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PROVINCIAL DEPARTMENT

Aziz Khssassi, P.E.
Bureau d'expertise et d'homologation en équipement sous-pression
Régie du bâtiment du Québec
545, boul. Crémazie Est, 7 étage
Montréal, Québec H2M 2V2
Canada

Telephone — 514.873.0927
Email — aziz.khssassi@rbq.gouv.qc.ca
Fax — 514.873.9929

Contact for design review and issuance of Canadian Registration Numbers (CRNs):

Junior Titan
Telephone — 514.873.8420
Email — junior.titan@rbq.gouv.qc.ca

Mail box for questions or comments for the design registration process:

approbationdesplans@rbq.gouv.qc.ca

EMPOWERMENT

Government empowered to make, alter, and amend rules and regulations by Orders and Council.
Boiler Board: No.

DATE OF LAW PASSAGE: 1867

Date of latest amendment to law: January 2003.
Date rules and regulations implemented: 1981.
Date of latest rules and regulations: April 1998.
Provincial statute: Quebec Revised Statutes, Chapter B-1.1. *Building Act*. (Umbrella act and replacing the *Act Respecting Pressure Vessels*.)

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. Provincial act and regulations (pressure vessels).
2. CSA: B51, B52, N285.0.
3. ASME Code, Section IX.
4. ASME B31.1, B31.2, B31.3, B31.4, B31.5.
5. Upon completion of construction, manufacturers must file a *Manufacturer's Data Report* for each boiler or pressure vessel shipped to the province. When manufactured in the United States, data report must be signed by a National Board-commissioned inspector.
6. Manufacturers must submit copies of drawings and specifications for registration with the department before commencing fabrication of any boiler or pressure vessel to be installed. For vessels manufactured outside Canada, name of the authorized inspection agency to be employed by the manufacturer must also be submitted along with request for registration.
7. Before use, fitting manufacturers must submit copies of drawings, specifications, and statutory declaration form for registration with the department. In addition, submission of rating sheets from the National Board or other recognized agency is required for each type, size, and classification of pressure relief device to be registered.

8. Drawings are to be submitted in triplicate; a single copy of the design calculations is required. (One stamped copy of the drawings will be returned to the applicant.)
9. *National Board Inspection Code* (Current Edition, Current Addendum).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: See when manufactured in the United States.

Stamping shall be in accordance with the applicable section of the ASME Code and include the Canadian registration number (must also be indicated on the data report).

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers and pressure vessels under supervision of the Department of Transport and subject to the inspection of the department.
2. Low-pressure steam, hot-water, and thermal fluid boilers when heating surface does not exceed 30 square feet or when power output does not exceed 30 kW.
3. Open-circuit boilers whose pressure cannot exceed 15 psi and which have no valve between the boiler and vent (leading directly to the atmosphere).
4. Hot-water or steam boilers having all the following characteristics:
 - a. No steam drum or steam header;
 - b. Tubes and coils are not used to produce steam;
 - c. Manually operated nozzles or sprinklers that conduct the fluid directly into the atmosphere;
 - d. Tubes have outside diameter not exceeding 1 inch, and the pipes have a nominal diameter not exceeding 3/4 inch;
 - e. Water volume not exceeding 6 gallons;
 - f. Temperature control device that prevents water temperature from exceeding 350°F;
 - g. Overpressure safety relief device adjusted to and sealed at a pressure not exceeding the design pressure (indicated on the boiler).
5. Water heaters with an inside diameter not exceeding 24 inches or with power output not exceeding 30 kW.
6. Hot-water tanks with an inside diameter not exceeding 24 inches used to contain water at a temperature not exceeding 250°F, and hot-water tanks not provided with a power source and containing water at a temperature of 150°F or less.
7. Pressure vessels not provided with direct power source, containing vapor or gas whose pressure cannot exceed 15 psi or liquid whose vapor pressure cannot exceed 30 psi in absolute pressure at maximum operating temperature (exception does not apply to refrigerating systems).
8. Pressure vessels used as the enclosure for gas pressurized electric equipment and any tank forming a part thereof.
9. Hydropneumatic tanks with a diameter not exceeding 24 inches and with a volume not exceeding 16 cubic feet.
10. Expansion tanks with a diameter not exceeding 24 inches.
11. Low-pressure piping and firefighting piping.
12. Vessels, not provided with a direct power source with a volume not exceeding 1-1/2 cubic feet or a diameter not exceeding 6 inches, regardless of pressure.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following: boilers and pressure vessels not installed in public buildings and industrial establishments.

INSPECTIONS REQUIRED

1. Periodic/in-service inspection of boilers and pressure vessels is required according to an established schedule that sets frequency and type of inspection required, internal and external, according to each type of vessel.
2. No periodic inspection is required for a refrigeration plant with total compressor capacity not exceeding 20

kW.

3. Periodic inspection by an authorized person:

- a. Periodic inspection may be made by the holder of a *Boiler's Inspector Certificate*, issued by the Provincial Department of Employment (Emploi - Québec) if the holder of the certificate has been authorized by the minister to do the inspection;
- b. Every time such an authorized person is called upon to inspect a vessel, he/she shall, in conformity with the regulations, complete a detailed report and file a copy with the department (which may recommend repair or alteration of the vessel whenever necessary);
- c. When the vessel is judged acceptable, a *Certificate of Inspection* is issued to its user.

INSURANCE INSPECTION REQUIREMENTS

Periodic inspections by insurance company inspectors are accepted by the department.

CERTIFICATE OF INSPECTION

1. Insured objects are certified by the insurance company responsible for the inspection. Uninsured objects are certified by the department.
2. Validity of the periodic inspection certificate varies in accordance with the required frequency of periodic inspection.

PROVINCIAL FEES

1. Fees for registration and inspection, except for inservice inspection, are based on an hourly rate of \$144.00 CAD. for the first hour and \$69.00 per additional half hour. A \$67.00 flat fee for traveling cost associated with inspection services.
2. Fees for inservice inspection vary according to the type of vessel and its dimensions.
3. Fees for the review of a quality control manual and the verification of its implementation are also based on an hourly rate of \$144.00 CAD. for the first hour and \$69.00 per additional half hour.

The regulation contains a provision for automatic indexation of fees on April 1 of each year.

MISCELLANEOUS

1. Repairs or alterations on any boiler or pressure vessel must be completed by authorized organizations or, alternatively, submitted to the department for approval.
2. All welders and welding procedures used on boilers and pressure vessels must be qualified in accordance with Section IX of the ASME Code. Qualification tests must be witnessed by the department.
3. Operation of power plants, heating plants, and refrigeration plants must be done by licensed operators. Type of attendance required by operators depends on plant kilowatt capacity.
4. Permits are required for installation of any boiler or pressure vessel before it is put into operation.

RHODE ISLAND



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STATE DEPARTMENT

Department of Labor and Training
Division of Occupational Safety
P.O. Box 20157
Cranston, RI 02920-0942

Telephone —401.462.8574
Fax — 401.462.8576

Express mail only:
1511 Pontiac Avenue, Building 70
Cranston, RI 02920-4407

EMPOWERMENT

The Administrator of Division of Occupational Safety empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1920

Date of latest amendment to law: July 1985.
Date rules and regulations implemented: 1989.
Date of latest rules and regulations: April 2003.
State statute: Rhode Island General Law, Title 28. Labor and Labor Relations, Chapter 25. *Boiler Inspections and Pressure Vessels*, Sections 1 through 23.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition, Current Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
2. Code addenda and case interpretations accepted automatically.
3. ASME CSD-1 (Current Edition) or NFPA (85 Series) as applicable.
4. ASME B31.1 (Current Edition).
5. Manufacturers must file a copy of *Manufacturer's Data Report* with the National Board on ASME forms before installation.
6. *National Board Inspection Code* (Current Edition, Current Addendum).
7. National Board registration required for boilers and pressure vessels.
8. API-510 (Current Edition).
9. Special design or construction requires approval of the administrator.
10. Rhode Island numbers assigned to all boilers and pressure vessels.
11. Code rules updated every year.
12. Foreign codes: state special. Details of the proposed construction material specifications and calculations approved by a registered professional engineer experienced in boiler and pressure vessel design are to be provided in the English language and US customary units to the administrator.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR. (All repair contractors must hold the applicable "NR," "R", or "VR" stamp issued by the National Board.)
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except:

1. Boilers and pressure vessels under federal control.
2. Boilers on motor vehicles, self-propelled boilers, ditching machines, cranes, pile drivers, wreckers, and steam shovels which are owned by railroads or railways.
3. Boilers on steam locomotives under the jurisdiction of the US Department of Transportation.
4. Boilers on vessels within the waters of the state.
5. Pressure vessels used for transportation and storage of compressed or liquefied gases when construction is in compliance with specifications of the US Department of Transportation and when charged with gas or liquid, marked, maintained, and periodically requalified for use.
6. Pressure vessels located on vehicles operating under the rules of other state or federal authorities and used for carrying freight or passengers.
7. Air tanks installed on the right-of-way of railroads and used directly in the operation of trains.
8. Pressure vessels not exceeding an inside diameter, width, height, or cross-section of 6 inches, with no limitation on length or pressure.
9. Pressure vessels having an internal or external working pressure not exceeding 15 psig, with no limit on size.
10. Pressure vessels with a nominal water-containing capacity of 120 gallons or less for containing water under pressure, including those containing air, the compression of which serves only as a cushion – providing the vessels do not exceed 300 psi and 180°F.
11. Pressure vessels containing water heated by steam or any other indirect means, when none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water-containing capacity of 120 gallons.
12. Hot-water supply boilers which are directly fired with oil, gas, electricity, or solid fuel, when none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Nominal water-containing capacity of 120 gallons.

Above exempt boilers shall be equipped with ASME-/National Board-approved safety valves.

13. Approved pressure vessels (hot-water heaters listed by a nationally recognized testing agency), with approved safety devices, including pressure temperature relief valve, with:
 - a. A nominal water-containing capacity of 120 gallons or less;
 - b. A heat input of 200,000 BTU per hour or less, used solely for hot-water supply at 160 psi or less;
 - c. Temperatures of 210°F or less.

Provided above vessels are not installed in places of public assembly such as schools, childcare centers, public and private hospitals, nursing and boarding homes, churches, or public buildings.

14. Boilers and pressure vessels in the care, custody and control of research facilities and used solely for research purposes.
15. Pressure vessels or other structures or components not considered to be within the scope of ASME Code Section VIII.
16. Antique boilers and pressure vessels whether or not used in public, nonprofit, engineering, and/or scientific museums and operated for educational, historical, or exhibition purposes with shell diameter less than 12 inches and with a grate surface area of less than 1 square foot.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except:

1. Steam boilers used for heating purposes carrying a pressure of not more than 15 psig, and which are located in private residences or in apartment houses of fewer than six family units, provided the boiler heat input does not exceed 400,000 BTU per hour.
2. Hot-water heating boilers which are located in private residences or apartment houses of fewer than six family units, provided the boiler heat input does not exceed 400,000 BTU per hour.
3. Hot-water boilers and hot-water heaters operated at pressures not exceeding 160 psig – or temperatures not exceeding 250°F – located in private residences or in apartment houses of fewer than six family units, provided the boiler or hot-water heater is not in a place of public assembly.
4. Pressure vessels on remote oil or gas producing lease locations that have fewer than ten buildings intended for human occupancy per .25 square mile and where the closest building is at least 220 yards from any vessel.
5. Pressure vessels not exceeding:
 - a. 5 cubic feet in volume and 250 psig in pressure;
 - b. 1-1/2 cubic feet in volume and 600 psig in pressure.
6. Air tanks at gas or service stations used to inflate tires on automobiles or other vehicles.

INSPECTIONS REQUIRED

Item	Internal	External	
Power boilers and high-pressure, high-temperature fluid boilers	1 Year	1 Year	<i>Low-pressure steam boilers shall be given an internal inspection where construction permits.</i>
Heating boilers, water heaters, and hot-water storage tanks	2 Years	—	<i>Low-pressure hot-water boilers shall be given an internal inspection at the discretion of the inspector.</i>
Pressure vessels (under the scope of ASME Section VIII)	3 Years (where construction permits)	2 Years	<i>Vessels not subject to internal corrosion shall be inspected externally.</i>

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies or approved owner/user inspection agencies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of required internal or external inspections must be filed with the department on National Board forms within 21 days after inspection.
3. Reports of external inspections on power boilers are not required unless there are code violations or dangerous conditions.
4. The department must be notified of boilers or pressure vessels on which insurance is *written, canceled, not renewed, or suspended* and the reasons thereof.
5. The department must be notified immediately on National Board forms of all boilers *suspended, canceled, or refused due to existing dangerous conditions*.
6. Any person, firm, partnership, or corporation operating pressure vessels in the state may seek approval and registration as an owner/user inspection agency. An application must be filed with the Division of Occupational Safety on prescribed forms. An application fee of \$50.00 and bond in the penal sum of \$25,000.00 is required. The bond must remain valid during the period the owner/user inspection agency is in effect.

CERTIFICATE OF INSPECTION

A *Certificate of Inspection* is issued by the department, upon payment directly to the department, of an annual \$50.00 fee for boilers and an annual \$25.00 fee for pressure vessels. Fees apply to owners/users of all boilers and pressure vessels inspected by both insurance company inspectors and approved owner/user inspection agencies.

STATE FEES

1. Power and high-pressure, high-temperature fluid boilers – internal inspection:
 - a. Heating surface of 50 square feet or less - **\$96.00**
 - b. Heating surface more than 50 square feet to 2,000 square feet - **\$120.00**
 - c. Heating surface more than 2,000 square feet to 4,000 square feet - **\$140.00**
 - d. Heating surface more than 4,000 square feet to 10,000 square feet - **\$180.00**

- e. Heating surface more than 10,000 square feet - **\$240.00**
- 2. Power and high-pressure, high-temperature fluid boilers – external inspection:
 - a. Heating surface of 50 square feet or less - **\$30.00**
 - b. Heating surface more than 50 square feet - **\$60.00**
- 3. Heating boilers:
 - a. Boilers without manhole - **\$60.00**
 - b. Boilers with manhole - **\$120.00**
 - c. Hot-water supply, water heaters/storage tanks - **\$60.00**
- 4. Pressure vessels:

Each vessel - **\$30.00**

A group of vessels, such as rolls on a single machine or unit, shall be considered as a single vessel.
- 5. Services:
 - a. Hydrostatic tests by state inspectors - **\$100.00**
 - b. Repair and alteration permit - **\$100.00**
 - c. Return visits for violations/charged to contractors - **\$100.00**
 - d. Return check fee - **\$25.00**
 - e. Overdue invoices - **\$25.00**
 - f. Certificates replacement fee - **\$10.00**
 - g. Portable boiler permits - **\$300.00**
- 6. All other inspections, including reviews and surveys, shop inspections, special inspections, and inspections of secondhand or used boilers or pressure vessels, made by the chief inspector or authorized inspector employed by the State of Rhode Island, shall be charged at the rate of not less than \$190.00 for two hours, \$275.00 for four hours or \$500.00 for one full day (including travel time, plus all expenses, including traveling, meals, and lodging, where applicable). The minimum charge shall be 2 hours (\$190.00).
- 7. No fee shall be charged for any internal or external inspection of a boiler operated by the state or cities, towns, fire districts, religious or charitable societies, sects, or associations.
- 8. Erectors or installers of new or secondhand boilers and pressure vessels shall first obtain a permit to install. Installers must possess a *Pipefitter Master 1* license. The fee for said permit shall be \$300.00 for a high-pressure unit and \$120.00 for a low-pressure unit.

MISCELLANEOUS

- 1. It is mandatory that the division or an authorized inspector be notified before initiating an alteration or major repair to any boiler or pressure vessel located within the state.
- 2. Examination for *Certificate of Competency* (National Board commission) is held by the chief boiler inspector on the first Wednesday in March, June, September, and December. An examination fee of \$60.00 is required.
- 3. A *Reciprocal Commission* is issued, for a fee of \$60.00 with an annual renewal fee of \$30.00, to an inspector holding a *National Board Commission* or a *Certificate of Competency* issued by a state with a standard written examination equal to that of the State of Rhode Island.
- 4. Operators of boilers in the cities of Providence and Woonsocket are required to be licensed.

SASKATCHEWAN



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PROVINCIAL DEPARTMENT

Christopher S. Selinger, Chief Inspector
Technical Safety Authority of Saskatchewan
2202 2nd Avenue
Regina, Saskatchewan S4R 1K3
Canada

Telephone — 306.798.7111 or 306.798.7112
Email — info@tsask.ca
Fax — 306.787.9273
Website - www.tsask.ca

EMPOWERMENT

Provincial legislature empowered to make, alter, or amend rules and regulations.
Delegation of services and enforcement to Technical Safety Authority of Saskatchewan.
Boiler Board: Yes (Boiler and Pressure Vessel Safety Board).

DATE OF LAW PASSAGE: 1905 – NEW LAW: 2007

Date of latest amendment to law: 2006.
Date rules and regulations implemented: 2007.
Date of latest rules and regulations: 2007.
Provincial statute: *The Boiler and Pressure Vessel Act, 1999. An act Respecting the Design, Construction, Installation, Operation, Alteration, Repair, and Sale of Boilers, Pressure Vessels, Plants, and Pressure Piping Systems.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA B51 *Boiler, Pressure Vessel and Pressure Piping Code* (2003 Edition), CSA B52 *Mechanical Refrigeration Code* (2005 Edition).
2. ASME BPV Code (2004 Edition, Current Addendum), Sections I, II, IV, V, VIII (Divisions 1, 2, and 3), IX, X.
3. Code cases and interpretations normally but not automatically accepted.
4. ANSI B31.1 (2004 Edition), B31.3 (2004 Edition), K61.1 (1999 Edition).
5. *National Board Inspection Code* (2004).
6. Manufacturers must file copy of *Manufacturer's Data Report*. Forms are supplied by the Authority upon request.
7. National Board registration required for boilers and pressure vessels brought in from outside Canada.
8. Liquefied petroleum gas containers must conform to ASME, CAN/CSA-B 149.2-00, and NFPA Standard No. 58.
9. Anhydrous ammonia storage tanks for use with NH₃ (as a liquid fertilizer) shall be designed, constructed, and used in accordance with CSA B51 code and American National Standards Institute, Inc. standard ANSI K-61.1-1999/CGA G-2.1 *Safety Requirements for the Storage and Handling of Anhydrous Ammonia*.
10. Manufacturers must pay the required fee and submit designs and specifications (in duplicate) to the Authority for approval and registration before commencing fabrication of any boiler or pressure vessel for installation in the province.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: all.

Boilers and unfired pressure vessels built to CSA/ASME standards in Canada must be shop-inspected and stamped by an inspector (employed by the Authority of the province in which the vessel is built).

Boilers and pressure vessels built to CSA/ASME standards in the US must be shop-inspected by an inspector holding a National Board Commission and employed by an ASME Code state or a boiler insurance company.

Appropriate CRN stamps are required.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, pressure vessels, plants, pressure piping systems, and fittings except:

1. Pressure piping systems that:
 - a. contain hot water at a pressure of 1/103 kilopascals or less or at a temperature of 121°C or less; and
 - b. form part of a low-pressure boiler plant.
2. Pressure piping systems that are not connected to, or used in connection with, a boiler or pressure vessel;
3. Medical gas piping systems;
4. Air piping with a diameter of 25.4 millimetres or less;
5. Any of the following types of pressure vessels that are used in connection with a pipeline as defined in *The Pipelines Act, 1998*:
 - a. odourizer tanks;
 - b. dust pots;
 - c. gas drips;
 - d. storage tanks for hydraulic valve operators;
 - e. pig traps;
 - f. indirect fired heater coils;
6. Potable water heaters with an internal diameter greater than 610 millimetres that:
 - a. operate at a pressure not exceeding 1/103 kilopascals;
 - b. have a heat input not exceeding 58.67 kilowatts;
 - c. produce a water temperature not exceeding 99°C; and
 - d. have a water capacity not exceeding 454 litres;
7. Pressure vessels used as the external enclosure of pressurized gas-filled electrical high voltage switch gear or control gear;
8. Low pressure boilers installed in a private residence designed to accommodate not more than three families;
9. A pressure vessel that is used for the transportation of dangerous goods as defined in the *Transportation of Dangerous Goods Act, 1992 (Canada)*;
10. A boiler or pressure vessel to which the *Canada Shipping Act* applies or that is subject to the jurisdiction of the Canadian Transportation Agency pursuant to the *Canada Transportation Act*;
11. A pipeline as defined in *The Pipelines Act, 1998*;
12. Gas equipment or a gas installation as defined in *The Gas Licensing Act*;
13. A boiler that is used in connection with a hot liquid heating system that has no valves or other obstructions to free circulation between the boiler and an expansion tank that is fully vented to the atmosphere;
14. A high pressure boiler that has a heating surface with an area of two square metres or less;
15. A low pressure boiler that has a heating surface with an area of three square metres or less;
16. A pressure vessel that has a volume of 0.0425 cubic metres or less;
17. A pressure vessel that has an internal diameter of 152 millimetres or less;
18. A pressure vessel that is used for the storage of hot water and has an internal diameter of 610 millimetres or less;
19. Those exempt under CSA B51 code. OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following: heating boilers in private residences and hot-water tanks less than 24 inches in diameter in a private residence designed to accommodate not more than three families.

INSPECTIONS REQUIRED

1. High pressure boilers: at intervals not exceeding one year:
2. Low pressure boilers: at intervals, as determined by the chief inspector, having regard to the service conditions and risk factors associated with the boiler, not exceeding two years. A low pressure hot water heating boiler of the coil or fin-tube type may be inspected at intervals not exceeding four years.
3. Pressure vessels: at intervals, as determined by the chief inspector, having regard to the service conditions and risk factors associated with the pressure vessel, not exceeding 10 years;
4. Refrigeration plants: at intervals, as determined by the chief inspector, having regard to the service conditions and risk factors associated with the refrigeration plant, not exceeding two years;
5. Compressed gas plants: at intervals, as determined by the chief inspector, having regard to the service conditions and risk factors associated with the compressed gas plant, not exceeding 10 years;
6. If the owner or insurer holds a valid certificate of authorization for a quality management system that applies to any of the above listed items, the inspection frequency would be that specified in the quality management system.
7. Where construction and service conditions permit, a periodic inspection of a boiler, pressure vessel, refrigeration plant or compressed gas plant must be an internal inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by an Authority inspector.
2. There is no requirement for insurance companies to inspect.
3. Inspection within the province is performed by the jurisdictional authority.
4. Notwithstanding bullet 1, an insurance company may apply for certification of a Quality Management System of Inspections to perform in-service inspections of equipment that they insure.

CERTIFICATE OF INSPECTION

Certificate of Inspection, valid for one or two years for boilers and five years (one year if considered hazardous) for unfired pressure vessels, is issued by the Authority. There is no fee for the inspection with licensing fees covering inspection costs.

LICENCE TO OPERATE

Licence to Operate, valid for one year for boilers and pressure vessels, is issued by the Authority. A Licence to Operate is only valid with a valid Certificate of Inspection. Fee varies based upon capacity: boilers — \$85.00 to \$1,304.00 CAD, pressure vessels — \$43.00 to \$724.00 CAD.

AUTHORITY FEES

All fees are payable at the time of application.

1. Application for registration of the design of a pressure piping system - **\$319.00 CAD + \$146.00/hr CAD over two hours**
2. Registration of a data report - **\$378.00 CAD**
3. Registration of a welding procedure - **\$146.00/hr CAD**
4. Registration of a quality control program - **\$876.00 CAD**
5. Application for a contractor's licence - **\$541.00 CAD**
6. Pressure Welder's licence - **\$163.00 CAD**
7. Guarded plant licence - **\$162.00 CAD**
8. Application for Quality Management System - **\$1,168.00 CAD**
9. Application for Pressure Equipment Inspector - **\$298.00 CAD**
10. Permit for NH3 storage plant - **\$82.00 CAD + \$146.00/hr**
11. Application for review by the Chief Inspector - **\$189.00/hr CAD**

12. Fees covering normal inspections/miscellaneous services - **\$146.00/hr CAD** + travel expenses
13. Fees covering special inspections/special services - **\$219.00/hr CAD** + travel expenses
14. Design Registration fee for boiler - **\$319.00 CAD + \$146.00/hr CAD over two hours**
15. Design registration fee for pressure vessel - **\$319.00 CAD + \$146.00/hr over two hours**
16. Design registration fee for heat exchanger - **\$319.00 CAD + \$146.00/hr over two hours**
17. Design registration fee for fitting - **\$319.00 CAD + \$146.00/hr over two hours**
18. Periodic inspection or shop inspection of boiler - **\$146.00/hr CAD**
19. Periodic inspection or shop inspection of pressure vessel - **\$146.00/hr CAD**
20. Permit fee for installation, repair, or alteration of boiler - **\$82.00 + \$146.00/hr CAD**
21. Permit fee for installation, repair, or alteration of pressure vessel - **\$82.00 + \$146.00/hr CAD**
22. Permit fee for installation, repair, or alteration of refrigeration plant - **\$82.00 + \$146.00/hr CAD**
23. Initial operating licence for all equipment - **\$108.00 CAD**
24. Operating licence for boiler - **\$85.00 - \$1,304.00 CAD**
25. Operating licence for pressure vessel - **\$43.00 - \$724.00 CAD**
26. Operating licence for refrigeration plant - **\$65.00 per vessel CAD**
27. Licence to operate as operator - **\$108.00 - \$216.00 CAD**
28. Operator examination fee - **\$54.00 - \$216.00 CAD**
29. NH3 storage and distribution plant licence - **\$292.00 - \$1,168.00 CAD**

MISCELLANEOUS

1. Pressure welders are subject to qualification tests.
2. All low-pressure boilers of 500 kW or more and all high-pressure boilers of 150 kW or more shall be in the charge of a certified power engineer or fireman as required in the regulations.
3. New installations require prior approval of chief inspector.
4. Chief inspector must be immediately notified by telephone or any other direct means of any explosion, serious fire, rupture, serious overheating of a boiler, pressure vessel, plant or pressure piping system; or any accident that causes death or serious injury to a person and arises out of the operation of a boiler, pressure vessel, plant, or pressure piping system.
5. All pressure piping designs over 0.5 cubic meters in internal volume must be stamped by a professional engineer.
6. Additional construction regulations are in force and available, without charge, from the Authority.
7. License is required to install or repair a boiler, pressure vessel, pressure piping system, or refrigeration plant.
8. Operators of boilers and pressure vessels are required to be licensed. An operator must be in attendance during boiler operation.
9. An annual license to operate is required for all boilers, pressure vessels, and refrigeration plants.
10. Category A, B, C and G fittings, as set out in Table 1 of the CSA B51 code, are not required to be registered.
11. All boilers and pressure vessels must be registered with a Saskatchewan CRN. Alternatively boilers and pressure vessels are not required to be registered with a Saskatchewan CRN if:
 - a. the boiler or pressure vessel is:
 - i. constructed in strict compliance with the administrative and technical rules of the appropriate section of the ASME code;
 - ii. stamped with the applicable code symbol stamp in accordance with the ASME code;
 - iii. registered with NBBi;
 - iv. the NBBi registration number is recorded on the data report and stamped on the name plate of the boiler or pressure vessel; and
 - v. the owner has submitted the data report to the chief inspector for registration along with the appropriate registration fee.
 - b. the boiler or pressure vessel is:
 - i. constructed in a province or territory of Canada other than Saskatchewan in strict compliance with the administrative and technical rules of the appropriate section of the CSA B51 code;

- ii. assigned a Canadian registration number by the boiler and pressure vessel authority of the province or territory in which it is constructed;
- iii. inspected during construction by an inspector employed by the boiler and pressure vessel authority of the province or territory in which it is constructed;
- iv. the registration number of the province or territory in which the boiler or pressure vessel is constructed is recorded on the data report required by the CSA B51 code and stamped on the name plate of the boiler or pressure vessel; and
- v. the owner has submitted the data report to the chief inspector for registration along with the appropriate registration fee.

SEATTLE, WASHINGTON



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MUNICIPAL DEPARTMENT

Larry C. Leet, Chief Pressure Systems Inspector
Department of Planning and Development
700 Fifth Avenue, Suite 2100
P.O. Box 34019
Seattle, WA 98104-4019

Telephone — 206.684.8459
Email — larry.leet@seattle.gov
Fax — 206.386.4039

EMPOWERMENT

City council empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1920

Date of latest amendment to law: August 2005.
Date rules and regulations implemented: 1920.
Date of latest amendment to rules and regulations: August 2005.
City ordinance: Seattle Municipal Code, Sections 6.230 and 22.450, *Boiler and Pressure Vessel Code*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code, Sections I, III, IV, VIII (Divisions 1, 2), X, and code cases with National Board stamping.
2. Code addenda and case interpretations accepted automatically. IAW Date of Manufacture.
3. ASME PVHO-1 (IAW Date of Manufacture).
4. ASME B31.1 (IAW Date of Manufacture).
5. Installers must file a copy of the Manufacturer's Data Report with the department before an installation is approved.
6. *National Board Inspection Code* (most current together with the addenda).
7. National Board registration required.
8. NFPA-85 when over 12,500,000 BTU/hr input.
9. Special design or construction requires approval of director.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: all.
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and unfired pressure vessels, except:

1. Any boiler or pressure vessel subject to regular federal inspection or licensed by federal authorities.

2. Potable hot-water heaters (fired, electric, thermal, solar, and indirect) and pool heaters, in other than Group A, E, and I occupancies, provided none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour; or
 - b. Water temperature of 210°F; or
 - c. Nominal water-containing capacity of 120 gallons; or
 - d. Pressure of 160 psi.
3. Portable unfired pressure vessels subject to regular inspection by State of Washington inspectors, and Interstate Commerce Commission/US Department of Transportation containers.
4. Containers for liquefied petroleum gases regulated by Seattle Fire Code.
5. Unfired pressure vessels in occupancy groups B, F, H, M, R, S, and U having a volume of 5 cubic feet or less operated at pressures not exceeding 250 psi.
6. Unfired pressure vessels of any size (other than those containing steam) protected by approved pressure relief devices set to operate at a pressure not exceeding 15 psi.
7. Electric boilers:
 - a. Having a volume not exceeding 1-1/2 cubic feet;
 - b. Having a maximum allowable working pressure of 100 psi;
 - c. Constructed (after June 10, 1994) to the *ASME Boiler and Pressure Vessel Code*, or listed or otherwise certified by a nationally recognized testing agency or recognized foreign testing laboratory.
8. Water storage tanks with no air cushion and no energy or heat source.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. All newly installed boilers, pressure vessels, and burners shall be inspected by a department inspector before being put into service.
2. All boilers, except boilers and pressure vessels in residences and in apartments of fewer than six dwelling units, shall have:
 - a. An annual external inspection;
 - b. An annual internal inspection where construction and operating conditions permit.
3. Unfired pressure vessels shall have an inspection every two years (internal inspections are required at inspector's discretion, where construction permits, or where specifically required by code). Ultrasonic thickness examination may substitute for internal inspection of unfired pressure vessels.

Installation permits are required.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies and holding a *National Board Commission* can be accepted in lieu of inspections made by a department inspector.

1. Reports of inspection must be filed within 30 days with the department on forms or in format approved by agency.
2. The department must be notified of *suspension of insurance on account of dangerous conditions*.
3. The department must be notified of *new business and discontinuance of insurance*.
4. The department must be notified of repairs and/or alterations.
5. The department must be notified of accidents.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the department. For insured objects, the Certificate of Inspection fee shall be 50% of the city inspection fee (but in no case less than the minimum fee).

MUNICIPAL FEES

Reference www.seattle.gov/dpd/codes/default.asp for a complete list of certification and construction fees.

MISCELLANEOUS

1. Permit is required to install a boiler, pressure vessel, burner, or control update.
2. Terms "Certified Automatic" and "Certified Monitored" are terms used for the purpose of describing inspected boilers and equipment added to facilitate licensed attendance requirements.
3. Operators of certain boilers are required to be licensed. Operator is required to be in attendance during boiler operation. Exceptions:
 - a. Any boiler subject to federal regulation;
 - b. Boilers not subject to reinspection;
 - c. Heating boilers (steam and water) and hot-water supply boilers having input of less than 2,500,000 BTU per hour;
 - d. Any boiler having an input of less than 100,000 BTU per hour and less than 100 psi;
4. A copy of the laws, rules, and regulations may be obtained by contacting:

City of Seattle
Boiler & Pressure Vessel Inspection
700 Fifth Avenue, Suite 2000
P.O. Box 34019
Seattle, WA 98124-4019

SOUTH CAROLINA



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STATE DEPARTMENT

Adrienne Youmans, Director

Michael S. Anderson, Administrator

Ronald W. Spiker, Chief Boiler Inspector
S.C. Department of Labor, Licensing, and Regulation
Boiler Safety Program
300 Windsor Drive
Shelby, NC 28150-6057

Telephone — 803.896.5171
Email — rspiker@carolina.rr.com
Fax — 803.896.4814

Express mail only:
110 Centerview Drive
Columbia, SC 29210

EMPOWERMENT

Boiler Board: No.

DATE OF LAW PASSAGE: 2005

Date rules implemented: May 2005; regulations implemented: January 2006
State Statute: South Carolina Code of Laws, Title 41. Labor and Employment, Chapter 14. *Boiler Safety Act*, Sections 41-14-10 through 41-14-150.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition, Current Addendum), Sections I and IV.
2. ASME CSD-1 (2001 Edition).
3. *National Board Inspection Code* (2004 Edition, 2004 Addendum).
4. National Board registration required for boilers.
5. NFPA 85.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R
2. ASME Code: S

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers except the following:

1. Boilers under federal control or under regulations of Title 49 of the Code of Federal Regulations, Parts 192 and 193.
2. Hot water supply boilers equipped with ASME/National Board-approved safety relief valves which are directly

fired with oil, gas, or electricity when none of the following limitations are exceeded: heat input of 200,000 BTU per hour; water temperature of 210°F; nominal water-containing capacity of 120 gallons.

3. Boilers in the care, custody, and control of research facilities used solely for research purposes which require one or more details of non-code construction (or which involve destruction or reduced life expectancy of those vessels) - so long as a timely inspection report is filed.
4. Boilers operated and maintained for the production and generation of electricity — so long as a timely inspection report is filed.
5. Boilers operated and maintained as part of a manufacturing process — so long as a timely inspection report is filed.
6. Boilers subject to OSHA standards of compliance - so long as a timely inspection report is filed.
7. Boilers operated and maintained by a public utility or the Public Service Authority including, but not limited to, boilers operated and maintained for the production of electricity - so long as a timely inspection report is filed.
8. All pressure vessels.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

All boilers are subject to inspection and reporting except the following:

1. Boilers located on farms used solely for agricultural or horticultural purposes.
2. Heating boilers located in private residences or in apartment houses of less than six family units.

INSPECTIONS REQUIRED

1. Power boilers and high-pressure, high-temperature water boilers: annually. Inspection must be internal; however, if internal inspection is not possible, the inspection must be as complete as possible. Boilers must be externally inspected while under pressure, if possible.
2. Low-pressure steam or vapor heating boilers: biennially. An internal inspection must be conducted every four years where installation permits.
3. Hot-water heating and hot-water supply boilers: biennially. An internal inspection must be conducted at the discretion of the inspector.

SOUTH DAKOTA



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STATE DEPARTMENT

Aaron M. Lorimor, Chief Boiler Inspector
State Fire Marshal's Office
118 West Capitol Avenue
Pierre, SD 57501

Telephone —605.773.3562

EMPOWERMENT

State senate and house of representatives empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1973

Date of latest amendment to law: July 2003.
Date rules and regulations implemented: 1973.
Date of latest rules and regulations: October 2003.
State statute: South Dakota Codified Laws, Title 34. Public Safety and Health, Chapter 29A. *Boiler Safety*, Sections 1 through 55.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition and addendum), Sections I, IV, V (2002 Edition), IX
2. *National Board Inspection Code* (2001 Edition).
3. National Board registration required for boilers.

Stamping:

New high- and low-pressure steel boilers shall be stamped with an ASME Code stamp and registered with the National Board.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. Boilers under federal jurisdiction.
2. Boilers located on farms (if farm is not regularly open to general public and boiler is used solely for agricultural or horticultural purposes).
3. Heating boilers located in private residences or in apartment houses of fewer than six family units.
4. Hot-water supply boilers (equipped with ASME-/National Board-approved safety relief valves) directly fired with combustible fuel, electricity or solar energy, when none of the following limitations is exceeded:
 - a. Heat input of 200,000 BTU per hour;
 - b. Water temperature of 210°F;
 - c. Water capacity of 120 gallons.
5. Boilers located in a refinery.
6. Boilers used as part of an electricity generating plant.

7. Historic power boilers (must comply with Chapter 34-29A of the state boiler safety code).

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

Item	Internal	External
Power boilers and high-pressure, high-temperature water boilers	1 Year	1 Year*
Low-pressure steam and vapor heating boilers	2 Years	2 Years
Hot-water heating and supply boilers	**	2 Years

Nuclear vessels: Designated by Department of Public Safety.
*Under pressure.
**At inspector's discretion.
Chief inspector may, at his/her discretion, permit longer periods between certificate inspections.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of internal inspections must be filed with the department within 30 days on National Board forms.
3. Reports of external inspections are not required, except for certificate inspections or the existence of dangerous conditions.
4. The department must be immediately notified of *suspension of insurance on account of dangerous conditions and discontinuance of insurance.*

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the chief inspector or his/her duly authorized representative upon payment of \$20.00 per boiler. Inspection certificate shall be valid for not more than 14 months for power boilers and high-pressure, high-temperature water boilers, and 26 months for heating boilers.

STATE FEES

1. Certificate inspections for power boilers and high-pressure, high-temperature water boilers:
 - a. Boilers 50 square feet of heating surface or less - **\$30.00**
 - b. Boilers more than 50 square feet of heating surface, and less than 4,000 square feet of heating surface - **\$40.00**
 - c. Boilers 4,000 square feet of heating surface or more, and less than 10,000 square feet of heating surface - **\$50.00**
 - d. Boilers 10,000 square feet of heating surface or more - **\$60.00**
2. External inspections for power boilers and high-pressure, high-temperature water boilers:
 - a. Boilers 50 square feet of heating surface or less - **\$15.00**
 - b. Boilers more than 50 square feet of heating surface - **\$25.00**
3. Certificate inspections for heating boilers:
 - a. Heating boilers without manhole - **\$40.00**
 - b. Heating boilers with manhole - **\$40.00**
 - c. Hot-water supply boilers - **\$20.00**
4. Special inspections: all owners, users or insurers of qualified boilers shall pay a yearly operation certificate fee if boiler is inspected by a state or special inspector.
 - a. Operation certificate - **\$20.00**
5. Historical boilers:
 - a. Initial inspection, plus travel - **\$100.00**
 - b. Hydrostatic test, plus travel - **\$45.00**

c. Ultrasonic examination, plus travel - **\$75.00**

d. Visual internal and external inspections, plus travel - **\$45.00**

6. For commercial boilers: fee for other inspections is a minimum \$90.00 for one half day (up to four hours) and \$150.00 for one full day (up to eight hours) plus travel.

MISCELLANEOUS

1. Examinations for *Certificates of Competency* are held by the state fire marshal.

2. *Reciprocal Commission* is issued, without charge, to insurance company inspectors holding an approved state or *National Board Commission*.

SPOKANE, WASHINGTON

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MUNICIPAL DEPARTMENT

Alvin E. Kimbrel, Boiler Inspector
Building Department
808 West Spokane Falls Boulevard
Spokane, WA 99201-3343

Telephone — 509.625.6313
Fax — 509.625.6822

EMPOWERMENT

City council empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes.

DATE OF LAW PASSAGE: 1936

Date of latest amendment to law: July 2010.
Date rules and regulations implemented: 1936.
Date of latest amendment to rules and regulations: August 2010.
City ordinance: Charter of the City of Spokane, Title 17F. Construction Standards, Chapter 17F.030. *Boiler and Pressure Vessel Code*, Sections .010 through .210.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2004 Edition), Sections I, II (Parts A, B, C, D), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XII, and PVHO-1.
2. Code addenda and case interpretations accepted automatically.
3. Part CF only (ASME CSD-1 [2002 Edition]).
4. *National Board Inspection Code* (2004 Edition).
5. NFPA 85 *Boiler and Combustion Systems Hazard Code* (2004 Edition).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, M, PP, S, U, U2, UV, V.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and unfired pressure vessels, except the following:

1. Boilers and unfired pressure vessels under federal jurisdiction or operated by any railroad subject to provisions of the Interstate Commerce Commission.
2. Unfired pressure vessels meeting requirements of the Interstate Commerce Commission for shipment of liquids or gases under pressure.
3. Air tanks located on vehicles operating under rules of other state authorities 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 when not located in a place of public assembly and having:
 - a. A volume of 5 cubic feet or less;
 - b. A design pressure not exceeding 15 psi (gage).
6. Tanks used in connection with heating water for domestic or residential purposes.

7. Tanks containing water with no air cushion and no direct source of energy operating at ambient temperature.
8. Steam boilers used exclusively for heating purposes with a pressure of not more than 15 psi (gage) located in private residences or in apartment houses of six families or fewer.
9. Hot-water heating boilers with a pressure of not more than 30 psi located in private residences or apartment houses of six families or fewer.
10. Unfired pressure vessels containing liquefied petroleum gases.
11. Unfired pressure vessels containing only water under pressure for domestic purposes (including those containing air, the compression of which serves only as a cushion for air lift pumping systems), when located in private residences or apartment houses of six families or fewer.
12. Electric Boilers meeting the following:
 - a. Tank volume of not more than 1-1/2 cubic feet;
 - b. Maximum allowable working pressure of 80 psi or less and a pressure relief system preventing excess pressure;
 - c. Constructed after June 10, 1994 to ASME Code, or approved or otherwise certified by a nationally recognized or foreign recognized testing laboratory or construction code.
13. Espresso machines.
14. Boiler or unfired pressure vessels located on farms or used solely for agricultural purposes.
15. Hot water heaters listed by a nationally recognized testing agency having:
 - a. Approved safety devices including a pressure/temperature relief valve;
 - b. Water capacity of 120 gallons or less;
 - c. Heat input of 200,000 BTUs per hour or less;
 - d. Pressure of 160 psi or less and a temperature of 200°F or less when used for hot water supply
 - e. Not installed in a school, childcare center, hospital, nursing or boarding home, church, public building owned or leased and maintained by the state or political subdivision thereof, or assembly hall.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers:
 - a. One annual internal inspection;
 - b. One annual external inspection.
2. Low-pressure heating boilers:
 - a. One biennial internal inspection where construction permits;
 - b. One biennial external inspection.
3. Unfired pressure vessels:
 - a. One biennial internal inspection where construction permits;
 - b. One biennial external inspection while under pressure.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies are accepted in lieu of inspections made by a jurisdiction department inspector. All initial installation inspections shall be made by a department inspector.
2. Reports of inspection must be filed with department on National Board forms within 30 days.
3. Department must be notified of *suspension of insurance on account of dangerous conditions* on National Board forms.
4. Department must be notified of *new business and discontinuance of insurance* on National Board forms.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the department. Operating permits for boilers inspected by insurance company

inspectors are one-half the city inspection fee. Operating permits for unfired pressure vessels are \$20.00 biennially.

MUNICIPAL FEES

All fees are for biennial inspections:

1. Permit fees for new installations are:

a. Low pressure and hot water boiler:

- i. Under 500,000 BTU - **\$150.00**
- ii. From 500,000 to under 2,000,000 BTU - **\$250.00**
- iii. 2,000,000 BTU and above - **\$400.00**

b. Power boiler:

- i. Under 1,000,000 BTU - **\$400.00**
- ii. From 1,000,000 to under 5,000,000 BTU - **\$800.00**
- iii. 5,000,000 BTU and above - **\$850.00**
plus **\$20.00** per 1,000,000 BTU over 5,000,000, to a maximum fee of **\$1,500.00** each.

c. Electric boiler under 250 kw - **\$200.00**

d. Unfired pressure vessel - **\$80.00**

e. When more than one pressure vessel is to be installed at the same time: The full fee is charged for the boiler with the highest fee and one-half the normal fee is charged for each of the others.

2. Inspection fees are:

a. Low pressure steam and hot water boiler:

- i. Under 2,000,000 BTU - **\$80.00** biennially each
- ii. 2,000,000 BTU or over - **\$100.00** biennially each

b. Power boiler:

- i. Under 1,000,000 BTU - **\$80.00** annually each
- ii. From 1,000,000 to under 5,000,000 BTU - **\$100.00** annually each
- iii. 5,000,000 BTU and over - **\$120.00** annually each

c. Electric boiler under 250 kw - **\$80.00** annually each

d. Unfired pressure vessel - **\$40.00** biennially each

e. Hydrostatic pressure test - **\$120.00** each

f. Repair - **\$75.00** per hour or fraction of an hour

3. The fee for an operating permit based on insurance company inspection is one-half the inspection fee.

4. Multiple Boilers:

If more than one boiler or pressure vessel is inspected on the same site, at the same time, by the city inspector, full fee is charged for one, and one-half fee is charged for all others.

5. In addition to the above fees, the processing fee for each permit is **\$25.00**

6. Reinspections:

The fee for reinspections for work that was not ready, or corrections previously identified but remaining uncorrected, or site not accessible is **\$75.00** per incident.

7. Inspections Outside Normal Inspector Working Hours:

The fee for inspections outside normal inspector working hours is **\$75.00** per hour or fraction of an hour. A minimum of two hours is payable at the time the request is made and before an inspection can be scheduled.

8. Work Done Without Permit/Investigation Fees:

Where work has commenced without first obtaining the required permit(s), a work without permit fee equivalent to the greater of:

- a. Twice the inspection fee, or
- b. The permit fee plus **\$150.00**

must be paid prior to the issuance of the permit(s).

Date Passed: Monday, June 23, 2008
ORD C34250 Section 1

MISCELLANEOUS

1. Boiler operators are required to be licensed. An operator is required to be in attendance during boiler operation.
2. A permit is required to install or repair boilers or pressure vessels.

ST. LOUIS, MISSOURI

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MUNICIPAL DEPARTMENT

Department of Public Safety
Trades Group
Room 425, City Hall
1200 Market Street
St. Louis, MO 63103

Telephone — 314.622.3375
Fax — 314.622.4094

EMPOWERMENT

Board of Stationary Engineers empowered to formulate rules and regulations and license stationary engineers.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1879

Date of latest amendment to law: September 2000.
Date rules and regulations implemented: 1879.
Date of latest amendment to rules and regulations: September 2000.
City ordinance: St. Louis Revised Code, Chapter 25.03. *Mechanical Code*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1998 Edition), Sections I, II, IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X with National Board stamping.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R.
2. ASME Code: H, S, U, U2.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All objects identified in the respective sections listed above, except those in or on properties owned and occupied by the US government or by the State of Missouri.

INSTALLATION PERMIT

1. An *Installation Permit* from the Mechanical Section, Department of Public Safety is required for all objects subject to *Rules for Construction and Stamping*, except Section IV boilers installed in R-3 (private residence) structures.
2. Permitted installations subject to initial inspection by city inspectors.

INSPECTIONS REQUIRED

1. Objects installed under permit: inspected at the time of installation and annually thereafter by city inspectors.
2. Insurance inspectors employed in field inspections must possess a *National Board Commission*.
3. Shop inspectors must possess a *National Board Commission* and be duly employed by an authorized inspection agency.

MISCELLANEOUS

1. Welded repairs to the pressure parts of all objects subject to the RULES FOR CONSTRUCTION AND STAMPING may be performed under permit from the Mechanical Section by a company possessing National

Board "R" stamp or the appropriate ASME stamp.

2. Hydrostatic tests required on all welded repairs.

3. R-1 reports required.

4. All Section I boilers must be attended by a stationary engineer, licensed by the Board of Stationary Engineers.

TENNESSEE



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STATE DEPARTMENT

Burns Phillips, Commissioner

Sam Chapman, Chief Boiler Inspector
Department of Labor and Workforce Development
Boiler Inspection Unit
220 French Landing Drive, Second Floor
Nashville, TN 37243-1002

Telephone — 615.532.1337
Email — Sam.Chapman@TN.gov
Fax — 615.532.1469

EMPOWERMENT

Board of Boiler Rules empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1949

Date of latest amendment to law: June 2000.
Date Boiler rules and regulations implemented: 1949.
Date Unfired Pressure Vessel rules and regulations implemented: 1955
Date of latest rules and regulations: September 2016.
State statute: Tennessee Code Annotated, Title 68. Health, Safety and Environmental Protection, Chapter 122. *Boiler Inspection, Erection and Repair.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition, Current Addendum), Sections I, II, III (Divisions 1, 2), IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI, XII, code cases, and case interpretations.
2. Addenda and case interpretations accepted automatically upon review.
3. ASME CSD-1 (Current Edition).
4. ASME B31.1 (Current Edition).
5. Manufacturers must file a copy of *Manufacturer's Data Report* with the department on ASME forms before installation.
6. *National Board Inspection Code* (Current Edition, Current Addendum). Repairs of a routine nature are accepted and allowed as per National Board Inspection Code.
7. National Board registration required for boilers and pressure vessels.
8. NFPA 85.
9. Electric boilers shall bear the Underwriters Laboratory label.
10. Pressure vessels containing liquefied petroleum gases are under the jurisdiction of the state fire marshal (ASME construction and National Board stamping is required). Installation shall be in accordance with National Fire Protection Association (NFPA) standards pertaining to liquefied petroleum gases.
11. Persons or firms engaged in the work of repairing, altering, or erecting boilers or pressure vessels in the state must hold a National Board "R" certification and license issued by the division. A valid *Certificate of Authorization*, issued by The National Board of Boiler and Pressure Vessel Inspectors, for use of the repair symbol stamp is required to qualify for a state *Boiler and Pressure Vessel Repair License*. To erect boilers or pressure vessels, the company must possess the appropriate ASME Certificate of Authorization.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

All boilers and pressure vessels shall be tagged with a Tennessee registration number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers under federal control.
2. Unfired pressure vessels meeting requirements of the US Department of Transportation for shipment of liquids or gases under pressure.
3. Air tanks located on vehicles operating under rules of other state authorities 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:
 - a. Having a volume of 5 cubic feet or less;
 - b. Designed for a working pressure of 15 psi or less.
6. Unfired pressure vessels containing liquefied petroleum gases (under jurisdiction of the state fire marshal).
7. Hot-water supply boilers (water heaters) with less than 200,000 BTU per hour heat input. However, such water heaters with a heat input of between 100,000 and 199,999 BTU per hour are subject to registration, inspection, and inspection certificate requirements of the *Tennessee Boiler Rules and Regulations*.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers located on farms used solely for agricultural purposes.
2. Boilers and pressure vessels located in municipalities where boiler inspection ordinances are in force, in accordance with provisions of Section 68-122-105 of the Tennessee Code.
3. Steam boilers used for heating purposes carrying a pressure of not more than 15 psi, located in private residences or in apartment houses of fewer than six families.
4. Hot-water heating boilers carrying a pressure of not more than 30 psi, located in private residences or in apartment houses of fewer than six families.
5. Unfired pressure vessels containing only water under pressure for domestic supply purposes and operated at a temperature not over 200°F, including those containing air, the compression of which serves only as a cushion.
6. Hot-water supply boilers (water heaters) with less than 100,000 BTU per hour heat input.

INSPECTIONS REQUIRED

Item	Internal	External
Power boilers	1 Year	1 Year*
Low-pressure boilers and hot-water supply boilers	2 Years	2 Years
Unfired pressure vessels (subject to corrosion)	2 Years	2 Years

Other unfired pressure vessels:
The board sets the interval for external inspection of vessels not subject to internal corrosion.
Certificate inspection of such vessels shall be made every two years.
*While under pressure.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance and owner/user companies and commissioned by the department are accepted in lieu of inspections made by department inspector.
2. Initial inspections to new, reinstalled, and secondhand high-pressure and low-pressure boilers and lethal service pressure vessels must be performed by a department deputy inspector.
3. Reports of internal inspections must be filed with the department on a board-approved form within 30 days.

4. Reports of external inspections must be filed with the department on a board-approved form within 30 days.
5. The department must be notified of *suspension of insurance on account of dangerous conditions*.
6. The department must be notified of *new business* and *discontinuance of insurance*.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the department upon payment of \$50.00 for unfired and low-pressure boilers and \$35.00 for high-pressure boilers. Certificate is valid for not more than 26 months for unfired and low-pressure boilers and 14 months for high-pressure boilers.

STATE FEES

1. Boilers – internal inspections:
 - a. Boilers of 5 hp or less or 50 square feet or less heating surface - **\$40.00**
 - b. Boilers more than 5 hp or more than 50 square feet heating surface - **\$40.00**
 - c. Boilers – external inspections - **\$25.00**
2. Pressure vessels:
 - a. Vessels having a cross-sectional area of 50 square feet or less - **\$25.00**
 - b. For each additional 100 square feet or fraction thereof - **\$6.00**

A group of unfired pressure vessels such as paper machine rolls or dryers operating as a single machine or unit shall be considered as one pressure vessel.

The inspection of secondhand or used boilers shall be charged at a rate of not less than \$250.00 for one half day of four hours (or less) and \$500.00 for one full day of four to eight hours (plus all expenses, including travel and hotel). Special inspections, shop inspection and quality control system reviews, or nuclear surveys shall be charged at a rate of not less than \$250.00 for one half day of four hours (or less) and \$500.00 for four to eight hours (plus expenses for travel, hotel, and sustenance).

Any inspection upon installation by permit (i.e., new, reinstallation, secondhand boiler, lethal service pressure vessel, etc.) is subject to the fees in accordance with Rule 0800-3-3-09(10) of the Tennessee Rules and Regulations.

MISCELLANEOUS

1. *Reciprocal Commission* is issued to inspectors holding approved state or *National Board Commission*. Fee is \$50.00.
2. Commissions must be renewed annually. Renewal fee is \$25.00.
3. Before installation, secondhand unfired pressure vessels must be inspected by a state inspector and issued an installation permit. All inquiries should be directed to the chief inspector.
4. The company or person responsible for the installation of a high- or low-pressure boiler or lethal service pressure vessel shall obtain an installation permit prior to any work being performed. The application and guidelines to submit may be found on the Web site or inquiry to the chief inspector.
5. Erection, repairs, and alterations to boilers and pressure vessels shall be completed by persons or firms licensed as provided in the *Boiler Erectors and Repairers Licensing Act*. Repair and Alteration Report Form R-1 and Form R-2, signed by the authorizing inspector, shall be submitted to the boiler and pressure vessel division for each repair and alteration.
6. Tennessee does allow repairs of a routine nature.
7. A copy of Tennessee's boiler and pressure vessel rules may be obtained by calling or writing to the Boiler and Elevator Inspection Division, by emailing the chief inspector, or by visiting the Web site. Cost: no charge.
8. A copy of the Tennessee database is available to all authorized inspection agencies free of charge.
9. During scheduled quarterly meetings, the Board of Boiler Rules will review all submissions of technical inquiries for Rule Cases and Rule Interpretations. Guidelines for submission can be retrieved by visiting the Web site.
10. Tennessee Boiler Attendant Variance and Boiler External Inspection Variance requests should be submitted to the Chief Boiler Inspector.

TEXAS



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STATE DEPARTMENT

Brian Francis, Executive Director

Robby D. Troutt, Chief Boiler Inspector
Texas Department of Licensing and Regulation (TDLR)
Compliance Division/Boiler Program
Twin Towers, East Tower, Suite 425E
P.O. Box 12157
Austin, TX 78711

Telephone — 512.539.5720
Email — rob.troutt@tdlr.texas.gov
Fax — 512.539.5687

Express mail only:
Texas Department of Licensing and Regulation
Compliance Division / Boiler Program
920 Colorado Street
Austin, TX 78701

EMPOWERMENT

Board of Boiler Rules appointed to act in an advisory capacity to the Texas Commission of Licensing and Regulation in formulating, altering, and amending rules.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1937

Date of latest amendment to law: June 2015.
Date rules and regulations implemented: 1938.
Date of latest rules and regulations: February 2016.
State statute: Boiler Law, Texas Health and Safety Code, Chapter 755. Administrative Rules, 16 Texas Administrative Code, Chapter 65.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current Edition), Sections I, III (Divisions 1, 2), IV, VIII (Divisions 1, 2, 3), XI, XII, code cases, and case interpretations.
2. Manufacturers shall file copy of *Manufacturer's Data Report* with the chief inspector on ASME forms through the National Board.
3. *National Board Inspection Code* (Current Edition).
4. National Board registration required for all boilers, except cast iron and cast aluminum.
5. Special design or construction requires approval of the Executive Director through the Chief Inspector.
6. Containers used for storing or dispensing liquefied petroleum gas are covered under a separate law and must be constructed and installed in accordance with the rules of the:

Railroad Commission
Liquefied Petroleum Gas Division
William B. Travis State Office Building
1701 North Congress
Austin, Texas 78701

Stamping:

Where appropriate, the following National Board stamps or ASME Certification Mark with designators are required:

1. National Board: NR, R, VR.
2. ASME Code: S, A, E, M, PP, V, H, HLW, HV, N, NA, NPT, NV, U, U2,U3, UD, UV.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers, except the following:

1. boilers owned or operated by the federal government;
2. pressure vessels or process steam generators, other than steam collection or liberation drums of process steam generators;
3. manually fired miniature boilers that:
 - a. are constructed or maintained for locomotives, boats, tractors, or stationary engines only as a hobby for exhibition, recreation, education, or historical purposes and not for commercial use;
 - b. have an inside diameter of 12 inches or less or a grate area of two square feet or less; and
 - c. are equipped with a safety valve of adequate size, a water level indicator, and a pressure gauge;
4. boilers that are designed for operation only at atmospheric pressure and that are equipped with two independent means to prevent the buildup of pressure; or
5. steam cookers.
6. Heating boilers used to heat buildings that are exclusively for residential use and that have accommodations for not more than four families are exempt from Sections 755.025, 755.027, 755.029, and 755.030.

Heating boilers used to heat buildings exclusively for residential use and having accommodations for not more than four families are exempt from inspection, reporting, Certificates of Operation, and fees.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers, unfired steam boilers, and steam collection or liberation drums of process steam generators must receive an annual certificate inspection and an annual external inspection.
2. Steam-heating boilers and hot-water heating boilers must receive a certificate inspection biennially.
3. Hot-water supply boilers and potable water heaters must receive a certificate inspection triennially.
4. Portable power boilers:
 - a. Annual internal inspection;
 - b. External inspection each time it is moved to a new location.
5. Nuclear boilers:
 - a. Inspected and reported in such form and with such appropriate information as the executive director shall designate;
 - b. Intervals of inspection shall be established between the executive director and the owner.
6. Extensions: Upon approval of the executive director and the inspection agency having jurisdiction, the interval between internal inspections may be extended to a period not to exceed 60 months for power boilers and 84 months for unfired boilers. For steam collection or liberation drums of process steam generators, the inspection interval may be extended to the next scheduled downtime of the boiler, but not exceeding a total of 120 months. Extensions may be requested in 12-month intervals only. A one-time emergency extension may be granted for up to 120 days.

AUTHORIZED INSPECTION AGENCY REQUIREMENTS

1. Inspections of boilers made by authorized inspectors employed by accredited authorized inspection agencies and commissioned by the department are required in lieu of inspections made by a deputy boiler inspector.
2. Reports of certificate inspection by authorized inspectors must be filed with the department manually or electronically, using the format provided by the department, within 30 days.

3. All authorized inspection agencies shall promptly notify the chief inspector, electronically or manually, using the format provided by the department, of all boiler risks or inspection agreements *rejected, canceled, not renewed, or suspended because of unsafe conditions*. If an authorized inspector finds conditions such that insurance is refused or inspection agreement canceled, the agency shall promptly notify the chief inspector and submit a report of the defects.

CERTIFICATE OF INSPECTION

Certificate of Operation, valid for a period not longer than the interval required for certificate inspection, is issued by the department upon payment of a fee not exceeding the sum of \$70.00. Fee is added when boiler is inspected by deputy inspector of the jurisdiction.

STATE FEES

1. Certificate of Operation - **\$70.00**
2. Boilers Inspections conducted by Deputy Inspector of the Jurisdiction other than Heating - **\$70.00**
3. Heating boilers without inspection opening - **\$40.00**
4. Heating boilers with inspection opening - **\$70.00**
5. Late fee if inspection is conducted 1 to 90 days after expiration of the Certificate of Operation - **\$35.00**
6. Late fee if inspection is conducted greater than 90 days after expiration of the Certificate of Operation - **\$70.00**
 - a. In addition, The department may refer any boiler that is ninety days past its inspection due date to another Authorized Inspection Agency for completion of the past due inspection. Any boiler referred under this suction shall be assessed and inspection fee made payable to the Authorized Inspection Agency who is assigned to conduct the inspection - **\$260.00**
7. Special inspection: fee for a special inspection is \$1,700.00. A prepayment of \$1700.00 shall be received by the department before the department can initiate the requested special inspection.

MISCELLANEOUS

1. Repairs and alterations may be performed by the following, provided intended work is within the scope of issued *Certificate of Authorization*:
 - a. Holders of a *Certificate of Authorization* from the National Board for use of "R" repair symbol stamp; or
 - b. Owner/operators of boilers issued a *Certificate of Authorization* by the Texas Department of Licensing and Regulation:
 - i. Issuance of *Certificate of Authorization* will be made upon submission of an application on forms provided by department;
 - ii. Review of applicant's program and facilities initially and at subsequent three-year intervals will be done.
 - i. Review will determine applicant has a documented program to control repairs and/or alterations conforming to minimum requirements established by the department;
 - ii. Review will require demonstration of applicant's ability to perform repairs and/or alterations by implementing — on representative work — the requirements of the written program.
2. All safety and safety relief valves for boilers must be repaired, tested, set, and sealed by one of the following, provided scope of issued *Certificate of Authorization* covers work to be performed:
 - a. An organization holding a valid V, HV, or UV *Certificate of Authorization*, as appropriate, issued by ASME;
 - b. An organization holding a valid VR *Certificate of Authorization* issued by the National Board;
 - c. An organization holding a valid owner/user *Certificate of Authorization* issued by the department. Such authorization may be granted or withheld by the executive director.
3. Once a Texas commission application is approved by TDLR examinations may be scheduled thru Psychological Services Inc. (PSI). Exams are offered at locations throughout Texas and the fee is \$55.00. For more information go to <http://www.tdlr.texas.gov/boilers/blrexam.htm>.
4. Texas commissions may be issued on a reciprocal basis to authorized inspectors holding *National Board Commissions* and who perform ASME new construction inspections only. Application shall be made on forms furnished by the chief inspector and accompanied by a photostatic copy of the applicant's *National Board Commission*, current renewal card, and the \$50.00 fee.
5. The Texas commission examination is mandatory for:
 - a. New issuance: inspectors applying for initial issuance who are designated by the employing authorized

inspection agency to perform inservice or a combination of inservice or ASME Code new construction inspections;

- b. Reinstatement: inspectors seeking reinstatement with time lapse of 12 months or more without any type of inspection activity and who are designated by the employing authorized inspection agency to perform inservice or a combination of inservice or ASME Code new construction inspections.

For new issuances and reinstatements for inservice inspectors, inspector must attend a mandatory orientation training.

- 6. Renewal of commissions is required annually during the month of December. Renewal fee is \$50.00. Late renewal: 90 days or less, \$75.00; more than 90 days, \$100.00. A person paying a late renewal fee is not required to pay the normal required renewal fee.
- 7. Variations may be requested from a rule or decision. The request for variation shall specify how equivalent safety is to be maintained.
- 8. The *Texas Boiler Law and Rules* is available on the department Web site, <http://www.tdlr.texas.gov/boilers/blr.htm>, or may be obtained by contacting the department by phone, written request, or email.
- 9. The city of Houston requires boiler operators to be licensed while operating certain sized boilers.

UTAH



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STATE DEPARTMENT

Rick K. Sturm, Chief Boiler & Pressure Vessel Inspector
Utah Labor Commission
160 East 300 South, Third Floor
Salt Lake City, UT 84114

Telephone — 801.554-9600
Email — rsturm@utah.gov
Fax — [801.530.6871](tel:801.530.6871)

EMPOWERMENT

Labor commissioner empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1941

Date of latest amendment to law: May 2006.
Date rules and regulations implemented: 1967.
Date of latest rules and regulations: November 2015
State statute: Utah Condensed Constitution, Title 34A. Utah Labor Code, Chapter 7. *Safety*, Sections 101 through 104.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2015 Edition), Sections I, II, III (Divisions 1, 2) IV, V, VI, VII, VIII (Divisions 1, 2, 3), IX, X, XI.
2. ASME CSD-1 2015 except part CG-130 (c)
3. ASME B-31.1 (2014 Edition).
4. *National Board Inspection Code* (2015 Edition).
5. National Board registration required for boilers and pressure vessels.
6. API-510 (Ninth Edition, June 2014, except Section 8 and Appendix A, 1998 and 2000 Addenda).
7. NFPA-85 (2015 Edition)
8. Special design or construction requires approval of the chief inspector.
9. *State Special* repairs require approval of the chief inspector.
10. Foreign codes: vessels must be registered with the National Board.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: A, E, H, HLW, HV, M, N, NA, NPT, NV, PP, RP, S, U, U2, U3, UM, UV, V.

All boilers and pressure vessels shall be stamped with a Utah serial number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Those boilers or pressure vessels under federal control.
2. Pressure vessels used for the transportation of compressed gases (if constructed and operated in compliance with specifications and regulations of the US Department of Transportation).
3. Pressure vessels containing air located on vehicles operating pursuant to regulations of other jurisdictional authorities.
4. Pressure vessels that do not exceed:
 - a. An operating pressure of 15 psig with no limit on size;
 - b. An inside diameter of 6 inches with no limit on pressure.
5. A vessel containing water under pressure, including those containing air, the compression of which serves only as a cushion, when none of the following limitations is exceeded:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210°F.
6. Pressure vessels containing water heated by steam or any other indirect means when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A water-containing capacity of 120 gallons.
7. Coil-type hot-water boilers without any steam space (where no steam is generated within the coil but where the water flashes into steam when released through a manually operated nozzle), when none of the following limitations is exceeded:
 - a. 1-inch nominal diameter tubing or pipe size with no drum or headers attached;
 - b. 6 gallons nominal water-containing capacity;
 - c. 350°F water temperature.
8. Hot-water supply boilers directly fired with oil, gas, or electricity when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A water-containing capacity of 120 gallons.
9. Water heaters including lined potable water heaters when none of the following limitations is exceeded:
 - a. A heat input of 200,000 BTU per hour;
 - b. A water temperature of 210°F;
 - c. A water-containing capacity of 120 gallons.
10. Pressure vessels which may be classified as:
 - a. Pressure containers which are integral parts of rotating or reciprocating mechanical devices (such as pumps, compressors, turbines, generators, engines, and hydraulic or pneumatic cylinders) where primary design considerations and/or stresses are derived from device's functional requirements;
 - b. Structures whose primary function is the transport of fluids from one location to another within a system of which it is an integral part (e.g., piping systems).
11. Boilers and pressure vessels located in private residences or in apartment houses with fewer than five family units.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers:
 - a. Annual certificate inspection;
 - b. Annual external inspection while under operating conditions.
2. High-temperature, high-pressure boilers: annual inspection with an internal inspection.

3. Heating boilers: biennial certificate inspection.
4. Steel steam boilers:
 - a. Annual internal certificate inspection;
 - b. External inspection to be performed while the boiler is in service, within the previous 24-month period.
5. Pressure vessels:
 - a. High-pressure heat exchangers: biennial certificate inspection;
 - b. All others: quadrennial certificate inspection.

Upon application from the owner/user (with a recommendation by the state boiler inspector or special inspector), the Labor Commission may authorize extension of the inspection period. Extension shall be granted in writing by the safety director with original and one copy going to the boiler operator and a second copy going to the authorized inspector. When the commission grants an extension, a new certificate (to be properly posted) will be issued to replace the original shorter-term certificate. The old certificate shall be destroyed. Owner/user pressure vessels shall be inspected in accordance with ANSI/API-510 when such owner/user organizations are approved by the commission.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies holding a Utah *Certificate of Competency* are accepted in lieu of inspections by division inspectors.
2. Reports of certificate inspection must be filed with the division on approved forms within 30 days.
3. The department must be notified immediately with a report of defects on boilers or pressure vessels that have been refused insurance *on account of dangerous conditions*.
4. The department must be notified within 30 days of all boilers or pressure vessels on which insurance is *written, canceled, not renewed, or rejected*.

CERTIFICATE OF INSPECTION

A *Certificate of Inspection*, valid for 12 months for power boilers, 24 months for low-pressure boilers, 24 months for high-pressure pressure vessels and 48 months for all other pressure vessels, is issued by the inspector. Certificate fees: see STATE FEES.

STATE FEES

Inspection fees charged by the division for the inspection of a boiler or pressure vessel shall be set by the state legislature. For current schedule of boiler inspection fees, contact the division at [801.530.6874](tel:801.530.6874) or see the Web site.

MISCELLANEOUS

1. Examinations for the National Board exam may be held at the office of the Labor Commission on the first Wednesday in March, June, September, and December. An examination fee of \$100.00 is required, upon director approval.
2. A *Reciprocal Commission* (certificate of competency) and identification card will be issued to an inspector holding a National Board Commission or approved state owner/user commission, upon application to the Utah Labor Commission, a payment of \$25.00, and a passing grade on an oral and written examination administered by the chief boiler and pressure vessel inspector. Annual identification card renewal \$20.00 fee.
3. Organizations performing repairs or adjustments on safety relief valves are required to have a valid "VR" authorization.
4. Call the office of the chief boiler inspector at [801.530.6874](tel:801.530.6874) for a copy of the boiler and pressure vessel rules and regulations. Cost: First copy at no charge or available on the Web site www.laborcommission.utah.gov.

VERMONT



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STATE DEPARTMENT

Department of Public Safety
Division of Fire Safety
1311 U.S. Route 302 - Suite 600
Barre, VT 05641

Telephone — 802.479.7561
Fax — 802.479.7562

EMPOWERMENT

Commissioner empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1952

Date of latest amendment to law: June 2011.
Date rules and regulations implemented: 1951.
Date of latest rules and regulations: 2006.
State statute: Vermont Statutes Annotated, Title 20 VSA, Chapter 173, Subchapter 5.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. Boilers and pressure vessels must be manufactured, constructed, and assembled in accordance with the appropriate ASME Code or equivalent standard recognized by The National Board of Boiler and Pressure Vessel Inspectors, in place at the time of manufacture. Also CSA (CRN) and European community for standardization - with limitations.
2. Manufacturers must file copy of *Manufacturer's Data Report* with department on ASME forms before installation of power boilers and unfired pressure vessels. Such forms must be filed before boiler is brought into state.
3. *National Board Inspection Code* (2004 Edition).
4. National Board registration required for boilers and pressure vessels.
5. Special design or construction requires approval by the department commissioner or designee.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R, VR.
2. ASME Code: A, E, H, HLW, HV, M, PP, S, U, U2, UM, UV, V.

All boilers and pressure vessels shall be stamped with a Vermont serial number followed by the letters "VT".

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers or pressure vessels located on common carriers subject to Surface Transportation Board, US Department of Transportation, Federal Railroad Administration, or Nuclear Regulatory Commission.
2. Pressure containers that are integral parts or components of rotating or reciprocating mechanical devices (i.e., pumps, compressors, turbines, generators, engines, hydraulic or pneumatic cylinders, etc.) where the primary

design consideration and/or stress is derived from the functional requirements of the device.

3. Steam cleaners: Coil-type boilers without any steam space where water flashes into steam when manually released through a nozzle for cleaning machinery, equipment, etc., and not exceeding:
 - a. Water capacity of 6 gallons;
 - b. Water temperature of 350°F (where no steam is generated in the coil).
4. Hot-water heaters and potable water storage tanks with:
 - a. Heat input of less than 200,000 BTU per hour;
 - b. Water temperature less than 210°F;
 - c. Water-containing capacity less than 120 gallons.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers:
 - a. Annual internal inspection;
 - b. Annual external inspection under pressure.
2. Low-pressure heating and hot-water supply boilers:
 - a. 2 year internal inspection;
 - b. 2 year external inspection.
3. Unfired pressure vessels subject to corrosion:
 - a. 3 year internal inspection;
 - b. 3 year external inspection.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors with a National Board commission and commissioned by the department are required.
2. Reports of internal inspections must be filed with the department on ASME forms within 30 days.
3. Reports of external inspections are not required unless dangerous conditions are present.
4. The commissioner must be notified within 30 days of *suspension of insurance on account of dangerous conditions, new business, and discontinuance of insurance.*
5. The commissioner must be notified immediately of *refusal to insure because of dangerous conditions.*
6. Requirements for companies operating unfired pressure vessels:
 - a. Inspections made by inspectors with a National Board commission and commissioned by the department are required.
 - b. Reports of internal and external inspections must be filed with the department on National Board forms within 30 days;

CERTIFICATE OF INSPECTION

1. A *Certificate of Inspection* is valid for 12 months for high-pressure power boilers, 24 months for low-pressure boilers, and 36 months for unfired pressure vessels.
2. Insurance company inspectors must notify the division within 30 days of insurance being canceled, not renewed, or refused on new boilers and pressure vessels.

STATE FEES

Certificate of Inspection or periodic inspection sticker - **\$30.00**

MISCELLANEOUS

Any accident, incident, or explosion of a boiler or pressure vessel involving personal injury must be immediately reported by the owner, user, or inspector to the division at 800.640.2106.

VIRGINIA



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STATE DEPARTMENT

Courtney Malveaux, Commissioner

Edward G. Hilton, Director and Chief Inspector
Department of Labor and Industry
Boiler and Pressure Vessel Safety Division
Main Street Centre
600 E. Main St., Suite 207
Richmond, VA 23219

Telephone — 804.786.3262

Email — ed.hilton@doli.virginia.gov

Fax — 804.371.2324

EMPOWERMENT

Safety and Health Codes Board empowered to make, alter, and amend rules and regulations. Variances granted by the commissioner, with appeal to the board.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1972

Date of latest amendment to law: March 2013.

Date rules and regulations implemented: 1974.

Date of latest rules and regulations: December 2012.

State statutes: Code of Virginia, Title 40. Labor and Employment, Chapter 3.1. *Boiler and Pressure Vessel Safety Act*, Sections 40.1.51.5 through 40.1.51.19.5. and Virginia Administrative Code, Title 16. Labor and Employment, Agency 25. Safety and Health Codes Board, Chapter 40, *Standards for Boiler and Pressure Vessel Certification*, Sections 10 through 70 and Chapter 55, *Financial Requirements for Boiler and Pressure Vessel Contract Fee Inspectors*, Sections 10 through 20.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition), Sections I, II, III (Divisions 1, 2, 3), IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases.
2. ASME CSD-1 (2009 Edition) general requirements, water-side controls and flame safeguards only.
3. *National Board Inspection Code* (2007 Edition).
4. National Board registration required for boilers and pressure vessels.
5. NFPA (85 Series).
6. Special design or construction requires prior approval of the commissioner.
7. Foreign codes: if registered with the National Board.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: Companies performing repairs and alterations must possess an "R" Stamp.
2. ASME Code: all.

All boilers and pressure vessels shall be stamped or tagged with a commonwealth serial number as follows: "VA

000000.”

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except the following:

1. Boilers or unfired pressure vessels owned or operated by the federal government or any agency thereof;
2. Boilers or fired or unfired pressure vessels used in or on the property of private residences or apartment houses of less than four apartments;
3. Boilers of railroad companies maintained on railborne vehicles or those used to propel waterborne vessels;
4. Hobby or model boilers as defined in § [40.1-51.19:1](#);
5. Hot water supply boilers, water heaters, and unfired pressure vessels used as hot water supply storage tanks heated by steam or any other indirect means when the following limitations are not exceeded:
 - a. A heat input of 200,000 British thermal units per hour;
 - b. A water temperature of 210° Fahrenheit;
 - c. A water-containing capacity of 120 gallons;
6. Unfired pressure vessels containing air only which are located on vehicles or vessels designed and used primarily for transporting passengers or freight;
7. Unfired pressure vessels containing air only, installed on the right-of-way of railroads and used directly in the operation of trains;
8. Unfired pressure vessels used for containing water under pressure when either of the following are not exceeded:
 - a. A design pressure of 300 psi; or
 - b. A design temperature of 210° Fahrenheit;
9. Unfired pressure vessels containing water in combination with air pressure, the compression of which serves only as a cushion, that do not exceed:
 - a. A design pressure of 300 psi;
 - b. A design temperature of 210° Fahrenheit; or
 - c. A water-containing capacity of 120 gallons;
10. Unfired pressure vessels containing air only, providing the volume does not exceed eight cubic feet nor the operating pressure is not greater than 175 pounds;
11. Unfired pressure vessels having an operating pressure not exceeding fifteen pounds with no limitation on size;
12. Pressure vessels that do not exceed:
 - a. Five cubic feet in volume and 250 pounds per square inch gauge pressure;
 - b. One and one-half cubic feet in volume and 600 pounds per square inch gauge pressure; and
 - c. An inside diameter of six inches with no limitations on gauge pressure;
13. Pressure vessels used for transportation or storage of compressed gases when constructed in compliance with the specifications of the United States Department of Transportation and when charged with gas marked, maintained, and periodically requalified for use, as required by appropriate regulations of the United States Department of Transportation;
14. Stationary American Society of Mechanical Engineers (ASME) LP-Gas containers used exclusively in propane service with a capacity that does not exceed 2,000 gallons if the owner of the container or the owner's servicing agent:
 - a. Conducts an inspection of the container not less frequently than every five years, in which all visible parts of the container, including insulation or coating, structural attachments, and vessel connections, are inspected for corrosion, distortion, cracking, evidence of leakage, fire damage, or other condition indicating impairment;
 - b. Maintains a record of the most recent inspection of the container conducted in accordance with subdivision a; and
 - c. Makes the records required to be maintained in accordance with subdivision b available for inspection by the Commissioner;
15. Unfired pressure vessels used in and as a part of electric substations owned or operated by an electric utility, provided such electric substation is enclosed, locked, and inaccessible to the public; or
16. Coil type hot water boilers without any steam space where water flashes into steam when released through a manually operated nozzle, unless steam is generated within the coil or unless one of the following limitations

is exceeded:

- a. Three-fourths inch diameter tubing or pipe size with no drums or headers attached;
- b. Nominal water containing capacity not exceeding six gallons; and
- c. Water temperature not exceeding 350° Fahrenheit.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Power boilers and high-temperature water boilers:
 - a. Certificate inspection annually;
 - b. External inspection annually while under operating conditions, if possible.
2. Heating boilers: Certificate inspection biennially:
 - a. Steam boilers: An internal inspection where construction permits;
 - b. Water boilers: An external inspection with internal inspection at discretion of the inspector, where construction permits.
3. Pressure vessels subject to internal corrosion: certificate inspection biennially with internal inspection at discretion of inspector, where construction permits.
4. Pressure vessels not subject to corrosion: certificate inspection biennially (external) with internal inspection at discretion of the inspector, where construction permits.
5. Pressure vessels under the supervision of an owner/user: User inspection agency shall inspect at such intervals as agreed upon with the board. Where the board has not approved owner/user frequency, above frequency shall be maintained.
6. Nuclear vessels: Boiler and pressure vessel components shall be inspected in accordance with Section XI of the *ASME Boiler and Pressure Vessel Code*. Reactors and generators are considered boilers.
7. State inspector may perform a certificate inspection on any object in which the certificate has been expired more than 90 days. A fee will be charged to the owner.

A grace period of two months is allowed beyond the periods listed above.

INSURANCE INSPECTION REQUIREMENTS

1. Special inspectors are commissioned by the commissioner.
2. Reports of inspection made by authorized insurance company inspectors or contract-fee inspectors shall be filed with the chief inspector on National Board forms within 30 days. Such inspections are acceptable in lieu of state inspections.
3. Hazardous conditions found at time of inspection must be reported immediately to the chief inspector on National Board forms.
4. Insurance companies shall notify the chief inspector within 30 days of all boilers or pressure vessels on which insurance is *written, canceled, or not renewed*. Notification is also required when coverage is *suspended because of unsafe conditions*.
5. Any person, firm, partnership, or corporation operating pressure vessels in the commonwealth may seek approval and registration as an owner/user inspection agency through the chief inspector. Qualifying agencies shall maintain a penal bond in the amount of \$5,000.00 and be subject to the same reporting requirements as listed above.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for not more than 14 months for power boilers and for not more than 26 months for low-pressure boilers and pressure vessels, is issued by the commissioner upon the payment of a \$20.00 fee to the commissioner.
2. No *Certificate of Inspection* issued for an insured boiler or pressure vessel shall be valid after the boiler or pressure vessel ceases to be insured by a duly authorized insurance company.
3. Inspection certificates are not required for pressure vessels inspected by an authorized owner/user inspection agency.
4. Annual reporting of inspections is required.

STATE FEES

1. High-pressure boilers - **\$135.00**
2. Low-pressure boilers - **\$70.00**
3. Pressure vessels - **\$50.00**

"Special" inspection fees are determined by the inspector or inspection agency.

MISCELLANEOUS

1. Examinations for *Certificates of Competency* are held at the office of the commissioner on the first Wednesday in March, June, September, and December. Examination fee is \$50.00.
2. *Certificate of Competency* and identification card are issued to inspectors who have passed the examination referred to previously and have paid the examination fee. Certificate and card may also be issued to a holder of a valid commission or *Certificate of Competency* from a state that has a standard of examination substantially equal to that of Virginia, and a valid commission and identification card issued by the National Board. Application shall be made on forms provided by the chief inspector at a fee of \$20.00. The application shall be accompanied by a photostatic copy of the applicant's commission, *Certificate of Competency*, and identification card.
3. An endorsement is required for any inspection of repairs and/or alterations. Inspectors with "A" or "B" endorsements need only apply for the "R" endorsement to the *Certificate of Competency* at a fee of \$20.00. Other inspectors must take an examination as described in Paragraph 1 at a fee of \$20.00.
4. The inspector's identification card must be renewed biennially, not later than June 30 of the year in which renewal is required, at a fee of \$20.00.
5. All secondhand boilers or pressure vessels must be inspected by a National Board or other state inspector before being shipped into Virginia for installation.
6. Applications for owner/user organizations should be sent to the chief inspector with proof of a bond of \$5,000.00 which shall continue in effect during the period of approval.
7. A copy of the *Boiler and Pressure Vessel Rules and Regulations* may be obtained from the jurisdiction website.

WASHINGTON



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STATE DEPARTMENT

Tony Oda, Chief Boiler/Pressure Vessel Inspector
Department of Labor and Industries
Field Services & Public Safety Division (FS & PS)
Boiler Program
PO Box 44410
Olympia, WA 98504-4410

Telephone — 360.902.5270
Email — odaa235@lni.wa.gov
Fax — 360.902.5292

Express mail only:
7273 Linderson Way, S.W.
Tumwater, WA 98501

EMPOWERMENT

Board of Boiler Rules empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1951

Date of latest amendment to law: May 2012.
Date rules and regulations implemented: 1951.
Date of latest rules and regulations: September 2015.
Rules, regulations and statutes: Chapter 296-104 WAC and Chapter 70.79 RCW.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (Current). (Sections I, III, IV, VIII, Div. 1,2,3, X, XII).
2. ASME CSD-1, Part CF (Current) and other jurisdictional accepted national and international standards.
3. Code case interpretations when accepted by the chief inspector.
4. Standards of construction approved by the chief inspector and meeting the National Board criteria for registration of boilers, pressure vessels and other pressure-retaining items.
5. ASME PVHO-1 (Current).
6. *Manufacturer's Data Reports* for new standard boilers and unfired pressure vessels shall be registered with the National Board.
7. *National Board Inspection Code* (Current).

The following rule changes become effective in Washington State September 2015.

- a. The standard for inspection of non-nuclear boilers, unfired pressure vessels, and safety devices is the *National Board Inspection Code* (NBIC), current edition Part 2, excluding Section 6 Supplements 1, 2, 5, 6, and 7 which may be used as non mandatory guidelines. This code may be used on or after the date of issue and becomes mandatory twelve months after adoption by the board as specified in RCW 70.79.050(2).
- b. The standard for inspection of historical steam boilers of riveted construction preserved, restored, or maintained for hobby or demonstration use, shall be Appendix "C" of the *National Board Inspection Code* [(as referenced in subsection (1) of this section)] (NBIC) 2004 edition with 2006 addenda.

The standard for repairs/alterations is:

- a. *National Board Inspection Code* (NBIC), current edition Part 3, excluding Section 6 Supplements 1, 2, 5, 6, and 10 which may be used as nonmandatory guidelines.
 - b. The standard for repair of historical boilers or riveted construction preserved, restored, or maintained for hobby or demonstration use, shall be Appendix C of the *National Board Inspection Code* (NBIC) 2004 edition with 2006 addenda.
8. National Board registration is required for boilers and pressure vessels. Standards of construction meeting the criteria for registration of boilers, pressure vessels, and pressure retaining items (NB-264, Revision 12), provided boilers and unfired pressure vessels are registered with the National Board.
 9. API-510 (Current Edition).
 10. Special design or construction requires approval of the Board of Boiler Rules.
 11. Only organizations with an appropriate National Board "R" *Certificate of Authorization* can perform repairs or alterations.
 12. All repairs and/or alterations to pressure boundary must be documented on appropriate "R" forms.
 13. Boilers constructed to foreign codes must meet requirements as *State Specials* and be approved by the Board of Boiler Rules.
 14. TAPPI TIP 0402-16 (2011 Edition) for pulp and paper machine dryers.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NB, NR, R, VR.
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

Total Exemptions from Chapter RCW 70.79.080:

1. Boilers and pressure vessels under federal regulation or operated by any railroad subject to provisions of the *Interstate Commerce Act*.
2. Unfired pressure vessels meeting requirements of the Interstate Commerce Commission for shipment of liquids or gases under pressure.
3. Air tanks located on vehicles operating under the rules of other state authorities and used for carrying passengers or freight.
4. Air tanks installed on right-of-way of railroads and used directly in the operation of trains.
5. Unfired pressure vessels having a volume of 5 cubic feet or less when not located in places of public assembly.
6. Unfired pressure vessels designed for a pressure not exceeding 15 pounds psi.
7. Tanks used in connection with heating water for domestic and/or residential purposes.
8. Boilers and pressure vessels in cities having ordinances which are enforced and which have requirements equal to or higher than those provided for under this chapter (covering the installation, operation, maintenance, and inspection of boilers and unfired pressure vessels).
9. Tanks containing water with no air cushion and no direct source of energy that operate at ambient temperature.
10. Electric boilers:
 - a. Having a tank volume of not more than 1-1/2 cubic feet;
 - b. Having a maximum allowable working pressure of 100 psi or less, with a pressure relief system to prevent excess pressure;
 - c. If constructed after June 10, 1994, constructed to ASME Code, or approved or otherwise certified by a nationally recognized or recognized foreign testing laboratory or construction code, including but not limited to Underwriters Laboratories, Edison Testing Laboratory, or Istituto Superiore Per La Prevenzione E La Sicurezza Del Lavoro.
11. Electric switchgear and control apparatus having no external source of energy to maintain pressure, located in restricted access areas under the control of an electric utility.
12. Regardless of location, unfired pressure vessels less than one and one-half cubic feet (11.25 gallons) in volume or less than six inches in diameter with no limitation on the length of the vessel or pressure;
13. Domestic hot water heaters less than one and one-half cubic feet (11.25 gallons) in volume with a safety valve setting of one hundred fifty pounds per square inch gage or less.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Exemptions from certain provisions (Inspection and fees) of RCW 70.79.090:

1. Boilers and pressure vessels located on farms and used solely for agricultural purposes.
2. Unfired pressure vessels that are part of fertilizer applicator rigs designed and used exclusively for fertilization in the conduct of agricultural operations.
3. Steam boilers used exclusively for heating purposes carrying a pressure of not more than 15 psig and which are located in private residences or in apartment houses of fewer than six families.
4. Hot-water heating boilers with a pressure of not more than 30 psi located in private residences or apartment houses of fewer than six families.
5. Approved pressure vessels (hot-water heaters, hot-water storage tanks, hot-water supply boilers, and hot-water heating boilers), with approved safety devices including pressure relief valve, with nominal water-containing capacity of 120 gallons or less having a heat input of 200,000 BTU per hour or less, used for hot-water supply at a pressure of 160 psi or less, and at temperatures of 210°F or less provided, **however**, that such pressure vessels are not installed in schools, childcare centers, public and private hospitals, nursing and boarding homes, churches, public buildings owned or leased and maintained by the state or any political subdivision thereof, and assembly halls.
6. Unfired pressure vessels containing only water under pressure for domestic supply purposes (including those containing air, the compression of which serves only as a cushion or airlift pumping system), when located in private residences or in apartment houses of fewer than six families, or in public water systems as defined in RCW 70.119.020.
7. Unfired pressure vessels containing liquefied petroleum gases.

INSPECTIONS REQUIRED

Item	Internal	External
Power boilers	1 Year	1 Year*
Organic vapor boilers	2 Years	1 Year*
Low-pressure heating boilers	2 Years	2 Years**
<i>One biennial internal inspection of low-water fuel cutoff.</i>		
Hot-water heaters	—	2 Years
Unfired pressure vessels	2 Years***	2 Years

*One inspection while under pressure and one not under pressure.
 **Under pressure.
 ***When subject to corrosion.

INSURANCE INSPECTION REQUIREMENTS

1. All insurance companies shall notify the chief inspector within 30 days of all boiler and/or unfired pressure vessel risks *written, canceled, not renewed, or suspended because of unsafe*

conditions. Special inspectors shall perform all inservice inspections of boilers and unfired pressure vessels insured by their employer. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections by a department inspector.

2. Reports of internal and external inspections must be filed with the department on approved forms within 30 days after inspection.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for not more than 14 months for power boilers and for not more than 26 months for low-pressure boilers and pressure vessels, will be issued by the department upon payment of a fee to the department.
2. No *Certificate of Inspection* issued for an insured boiler or pressure vessel shall be valid after the boiler or pressure vessel ceases to be insured by a duly authorized insurance company.

STATE FEES

1. Heating boilers (internal inspection):
 - a. Cast iron, all sizes - **\$36.30**
 - b. All other boilers less than 500 square feet - **\$36.30**
 - c. 500 square feet to 2,500 square feet - **\$72.40**
 - d. Each additional 2,500 square feet of total heating surface, or any portion thereof - **\$29.00**
2. Heating boilers (external inspection):
 - a. Cast iron, all sizes - **\$29.00**
 - b. All other boilers less than 500 square feet - **\$29.00**

- c. 500 square feet to 2,500 square feet - **\$36.30**
 - d. Each additional 2,500 square feet of total heating surface, or any portion thereof - **\$14.20**
3. Power boilers (internal inspection):
- a. Less than 100 square feet - **\$36.30**
 - b. 100 square feet to less than 500 square feet - **\$43.90**
 - c. 500 square feet to 2,500 square feet - **\$72.40**
 - d. Each additional 2,500 square feet of total heating surface, or any portion thereof - **\$29.00**
4. Power boilers (external inspection):
- a. Less than 100 square feet - **\$29.00**
 - b. 100 square feet to less than 500 square feet - **\$29.00**
 - c. 500 square feet to 2,500 square feet - **\$36.30**
 - d. Each additional 2,500 square feet of total heating surface, or any portion thereof - **\$14.20**
5. Pressure vessels: automatic utility hot-water supply heaters per RCW 70.79.090 - **\$6.70**
6. All other pressure vessels – internal inspection (Square feet shall be determined by multiplying the length of the shell by its diameter.):
- a. Less than 15 square feet - **\$29.00**
 - b. 15 square feet to less than 50 square feet - **\$43.00**
 - c. 50 square feet to 100 square feet - **\$50.10**
 - d. For each additional 100 square feet or any portion thereof - **\$50.10**
7. All other pressure vessels – external inspection (Square feet shall be determined by multiplying the length of the shell by its diameter.):
- a. Less than 15 square feet - **\$21.50**
 - b. 15 square feet to less than 50 square feet - **\$21.50**
 - c. 50 square feet to 100 square feet - **\$29.00**
 - d. For each additional 100 square feet or any portion thereof - **\$14.20**
8. *Certificate of Inspection* fee for each object inspected - **\$14.20**
9. Boiler and pressure vessel installation/reinstallation permit (excludes inspection) - **\$50.00**
10. Non-nuclear shop inspections, field construction inspections, and special inspection services:
- a. For each hour or part of an hour up to eight hours - **\$43.90**
 - b. For each hour or part of an hour in excess of eight hours - **\$65.50**
11. Nuclear shop inspections, nuclear field construction inspections, and triennial nuclear shop survey and audit:
- a. For each hour or part of an hour up to eight hours - **\$65.50**
 - b. For each hour or part of an hour in excess of eight hours - **\$102.40**
12. Triennial non-nuclear shop survey and audit:
- a. When state is authorized inspection agency:
For each hour or part of an hour up to eight hours - **\$43.90**
 - b. When state is authorized inspection agency:
For each hour or part of an hour in excess of eight hours - **\$65.50**
 - c. When insurance company is authorized inspection agency:
For each hour or part of an hour up to eight hours - **\$65.50**
 - d. When insurance company is authorized inspection agency:
For each hour or part of an hour in excess of eight hours - **\$102.40**
13. Examination fee (charged for each applicant sitting for an inspection examination) - **\$81.00**
14. Special inspection commission:
- a. Initial fee - **\$27.40**
 - b. Annual renewal (includes work card charge) - **\$27.40**

Expenses shall include travel time and mileage. Department will charge for inspector's travel time from office to inspection site and return. Travel time will be charged at the same rate as that for the inspection, audit, or survey.

Mileage, or actual cost of purchased transportation, will be charged at the office of financial management-approved rate. Hotel and meals: Actual cost not to exceed the office of financial management-approved rate.

For vessels to be considered by the board for a state special certificate, a fee of \$407.40 must be paid to the department before the board meets. The board may, at its discretion, prorate the fee when a number of vessels which are essentially the same are to be considered.

MISCELLANEOUS

1. The National Board *Rules for Repairs and Alterations to Boilers and Pressure Vessels* is acceptable to the department.
2. The National Board "R" form and completed traveler are required for all repairs and alterations. Repair organizations shall hold a National Board "R" *Certificate of Authorization*.
3. The appropriate National Board *Certificate of Authorization* is required to repair and restamp safety devices.
4. National Board rules for riveted repairs are acceptable to the department with concurrence of the chief inspector.
5. Examinations for *Certificate of Competency* may be held at the office of the chief inspector by appointment. Examination fee is required.
6. Depending on boiler controls, an operator may be required to be in attendance during boiler operation.
7. A copy of the boiler and pressure vessel rules and regulations may be obtained on the Internet at www.lni.wa.gov/tradeslicensing/boilers.
8. Civil penalties are as described in *Washington Administrative Code* 296-104-701 for operating without a valid certificate or installation permit, or operating (under pressure) a boiler and/or pressure vessel which the department has condemned, issued a red tag for, or has suspended the inspection certificate.
9. For mandatory installation requirements of new or replaced boilers and pressure vessels, see *Washington Administrative Code* 296-104-020 and 296-104-200–296-104-330.

WASHINGTON, D.C.

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MUNICIPAL DEPARTMENT

Linda Argo, Director

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EMPOWERMENT

City council empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1936

Date of latest amendment to law: November 1999.
Date rules and regulations implemented: 1936.
Date of latest amendment to rules and regulations: November 1999.
City ordinance: District of Columbia Code, Division 1. Government of District, Title 2. Government Administration, Chapter 1. *Inspections – Boilers*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2001 Edition, 2002 Addendum), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X, XI, and code cases with National Board stamping.
2. ASME CSD-1 (2002 Edition).
3. ASME PVHO-1 (1997 Edition).
4. Manufacturers must file copy of *Manufacturer's Data Report* with the department on ASME forms before installation. All boilers and pressure vessels must be shop-inspected and stamped ASME (except low-pressure heating boilers) and National Board by an inspector holding a *National Board Commission*.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: VR.
2. ASME Code: A, E, H, PP, U.

All boilers and unfired pressure vessels shall be stamped with a District of Columbia serial number with the letters "DC" at the beginning and end of the number.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except:

1. Those under federal government jurisdiction.
2. Those on boats or floating equipment.
3. Those on railway locomotives.
4. Those under the Public Utilities Commission jurisdiction.
5. Unfired pressure vessels with a capacity of 15 gallons or less, and those constructed for a pressure of 60 psi or less.

OBJECTS SUBJECT TO RULES For FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except boilers constructed for a pressure of 15 psi or less having unassisted gravity return, and hot-water heating boilers not subject to annual inspection.

INSPECTIONS REQUIRED

1. Steel boilers: an annual internal inspection.
2. Cast-iron boilers and unfired pressure vessels: an annual external inspection.
3. Portable and other unfired pressure vessels: an annual external inspection.
4. Permits required for the installation of all boilers and unfired pressure vessels. First inspection is made by a department inspector regardless of whether the object is insured.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the department are accepted in lieu of inspections made by a department inspector.
2. Reports of inspection must be filed with the department on National Board forms within 30 days.
3. A data report based on an internal inspection shall be submitted by an insurance company when it makes its first inspection of any boiler or unfired pressure vessel.
4. An internal inspection is not required immediately when insurance coverage changes from one insurance company to another – if a report is submitted by the new carrier on the *National Board External Inspection Report* form within 15 days from the date of taking coverage.
5. The department must be notified of *suspension of insurance on account of dangerous conditions* on National Board forms.
6. The department must be notified of *new business* and *discontinuance of insurance* on National Board forms.

CERTIFICATE OF INSPECTION

1. *Certificate of Inspection*, valid for 12 months, is issued by the department upon payment to the District of Columbia treasurer of a \$25.00 fee by the owner/user, for those objects inspected by insurance companies.
2. An inspection certificate for an insured boiler or unfired pressure vessel becomes invalid when the unit ceases to be insured by a duly authorized insurance company.

DISTRICT FEES

1. Heating boilers:
 - a. Up to 8,500 square feet steam radiation, inclusive - **\$52.00**
 - b. Over 8,500 square feet steam radiation - **\$100.00**
2. Power boilers:
 - a. Up to 10 hp inclusive - **\$52.00**
 - b. 11 to 50 hp inclusive - **\$65.00**
 - c. 51 to 150 hp inclusive - **\$100.00**
 - d. Over 150 hp - **\$195.00**
3. Miniature boilers - **\$46.00**
4. Unfired pressure vessels - **\$33.00**
5. Miscellaneous objects:
 - a. Fire tire molds, kettles, mangles, electric boilers, and similar equipment - **\$50.00**
 - b. Penalty – failure to prepare for internal inspection - **\$50.00**

Inspections made on Sundays and legal holidays, other than regular working hours, shall be twice the normal fee prescribed. All fees above include the issuance of a Certificate of Inspection on uninsured objects.

MISCELLANEOUS

1. *Certificate of Competency* will be granted without examination to an inspector holding a National Board Commission upon application to the department, together with a photostatic copy of applicant's National

Board Commission. A fee of \$100.00 for each two-year period is required.

2. Permits are required to install boilers and pressure vessels.
3. Operators of boilers and pressure vessels are required to be licensed.

WEST VIRGINIA



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STATE DEPARTMENT

John Junkins, Acting Commissioner

John F. Porcella, Chief Boiler Inspector
Division of Labor, Safety Section
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Charleston, WV 25305

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Email — john.f.porcella@wv.gov

EMPOWERMENT

Commissioner of labor empowered to make, alter, and amend rules and regulations.
Boiler Board: No.

DATE OF LAW PASSAGE: 1937

Date rules and regulations implemented: 1937.
Date of latest rules and regulations: July 2008.
State statute: West Virginia Code, Chapter 21. Labor, Article 3. Safety and Welfare of Employees, Section 7.
Regulation of Operation of Steam Boilers.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2007 Edition), Sections I, II, V, and IX
2. Code addenda and case interpretations accepted.
3. Owners must file a copy of *Manufacturer's Data Report* with the division on ASME forms before installation.
4. *National Board Inspection Code* (2004 Edition, 2006 Addendum).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NB, R, VR.
2. ASME Code: A, E, M, PP, S, V.

Boilers must be stamped with state serial number at the time of first inspection. The stamping is "W.....W".

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All steam boilers, except the following:

1. Boilers under the jurisdiction of the federal government.
2. Boilers carrying not more than 15 psi.
3. Railroad locomotive boilers subject to inspection under federal laws.
4. Portable boilers used for agricultural purposes.
5. Boilers on automobiles.
6. Boilers of steam fire engines brought into the state for temporary use in cases of emergency.

7. Boilers in private residences used solely for residential purposes.
8. Sectional boilers.
9. Small portable boilers used in the oil and gas industry (around wells and tool houses).

The term "small portable boiler" is interpreted by the division as one capable of being easily carried, weighing less than 200 pounds.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. Installation.
2. Annual internal and external.
3. Rental boilers coming into the state for temporary use.

INSURANCE INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and commissioned by the division are accepted in lieu of inspections made by a division inspector.
2. Reports of inspections must be filed with the division on National Board (or similar) forms within 10 days.
3. External inspection reports involving code violations or dangerous conditions are required. Via report form and phone contact for dangerous conditions. 304-415-6835 Chief Boiler Inspector.
4. The division must be notified of *suspension of insurance on account of dangerous conditions* on National Board (or similar) forms.
5. The division must be notified of *new business* and *discontinuance of insurance* on National Board (or similar) forms.

CERTIFICATE OF INSPECTION

A *Permit to Operate*, valid for 12 months, is issued by the division for an annual fee of \$50.00.

STATE FEES

1. Boiler inspection:
 - a. 1 to 100 square feet - **\$150.00**
 - b. 101 to 500 square feet - **\$200.00**
 - c. More than 500 square feet - **\$250.00**
2. For the processing of inspection reports - **\$50.00**
3. For commissioning insurance company boiler inspectors - **\$50.00**
4. For permit to operate boiler - **\$50.00**
5. Emergency extension of operating permit - **\$100.00**

Hobby boilers are inspected free of charge; however, a \$25.00 fee is charged for a permit to operate.

MISCELLANEOUS

1. Insurance inspectors must hold a West Virginia *Certificate of Competency*.
2. The *National Board Inspection Code* has been adopted as the standard for inspections, repairs, and alterations.

WISCONSIN



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STATE DEPARTMENT

Terence Waldbillig, Boiler Inspector III
Boiler / Mechanical Equipment Safety
Department of Safety & Professional Services
Division of Industry Services
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New Berlin, WI 53151

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EMPOWERMENT

Department of Safety & Professional Services empowered to make, alter, and amend rules and regulations.
Boiler Board: Yes. (Contact above official for more information.)

DATE OF LAW PASSAGE: 1914

Date of latest amendment to law: Effective June 1, 2012.
Date rules and regulations implemented: 1914.
Date of latest rules and regulations: Effective June 1, 2012.
State statute: Pursuant to S.101.17m the Department of Safety & Professional Services, Division of Industry Services, enforces Wisconsin Administrative Code, SPS Chapter 341, *Boilers and Pressure Vessels*.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (2010 Edition), Sections I, II, IV, V, VIII (Divisions 1, 2), IX, X, and code cases.
2. Code addenda and case interpretations may be accepted.
3. ASME B31.1 (2010 Edition) and B31.5 (2006 Edition).
4. ASME PVHO-1 (2007 Edition), PVHO-2 (2003 Edition).
5. National Board registration required for boilers and pressure vessels except CI "H" boilers and "UM" vessels.
6. *National Board Inspection Code* (2011 Edition). Parts 1, 2 and 3.
7. API 510 (9TH Edition, June 2006).
8. ASME CSD-1 (2009 Edition).
9. Special design or construction requires approval by the division.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: NR, R, VR.
2. ASME Code: all.

Boilers and pressure vessels stamped Wisconsin Special must be inspected and stamped by an inspector holding a Wisconsin commission. Boilers and pressure vessels shall be assigned a registration number which shall be affixed to the object by a certified inspector.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All boilers and pressure vessels, except:

1. Water heaters and hot-water storage tanks, provided water temperatures do not exceed 210°F.
2. Vessels for containing water under pressure for domestic supply, including those having an air space for expansion.
3. Pressure vessels used for the processing or storage of water at water temperatures not exceeding 210°F. (These vessels may contain a steam or hot-water coil or heat exchanger, provided the steam is at or below a pressure of 15 psig and the hot water is at or below a pressure of 160 psig and a temperature of 250°F.)
4. Pressure vessels used for water conditioning and filtration.
5. Pressure vessels used in processing and storing fermented beverages at temperatures not exceeding 140°F.

Items 1 through 5 are required to meet the pressure-relief device requirements of the ASME Code listed or the applicable Wisconsin Administrative Code.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING, except the following:

1. Boilers or pressure vessels regularly inspected by US government inspectors.
2. Heating boilers located in private residences or in apartment buildings having fewer than three family units.
3. Expansion tanks for hot-water heating boilers.
4. Boilers used exclusively for agricultural purposes.
5. Hot-water supply boilers, water heaters, and hot-water storage tanks in which the temperature does not exceed 210°F.
6. Pressure vessels having:
 - a. An inside diameter not exceeding 6 inches, with no limit on pressure;
 - b. A volume less than 5 cubic feet and an operating pressure less than 250 psig;
 - c. A volume less than 1-1/2 cubic feet, with no limit on pressure;
 - d. An internal or external operating pressure of not more than 15 psig, with no limitation on size.
7. Pressure vessels which are used in accordance with the regulations of the US Department of Transportation.
8. Vessels used for storage or processing of cold water, including those with air cushions.
9. Air receivers having a volume less than 90 gallons (~12.033 cu ft) and a working pressure less than 200 psig as stamped on the manufacturer's nameplate.
10. Vessels used in processing and storing of fermented beverages at temperatures not exceeding 140° F.
11. Any pressure vessel used as an integral part of an electrical circuit breaker.
12. Installations at one or two family dwellings.

INSPECTIONS REQUIRED

1. Power boilers: One annual internal inspection. Where an internal inspection is not possible because of construction, an external inspection will be accepted. Should operating conditions require longer periods between inspections, an extension of time may be granted upon written application to the department and written concurrence of inspection agency.
2. Low-pressure steam and hot-water boilers: one external or internal inspection every 36 months.
3. Pressure vessels: one external or internal inspection every 36 months.
4. Anhydrous ammonia storage and nurse tanks: one inspection every 36 months.
5. Power piping and welded refrigeration piping: welder documentation and material inspection prior to start of fabrication.

INSURANCE AND INSPECTION REQUIREMENTS

1. Inspections made by inspectors employed by insurance companies and holding *Certificates of Competency* issued by the department are accepted in lieu of inspections made by a department inspector.
2. Inspections made by inspectors employed by owners/users and holding *Certificates of Competency* issued by the department are accepted in lieu of inspections made by a department inspector.
3. Reports of inspection must be filed with the department within 30 days after inspection on department forms (SBD-10663).

4. External inspections shall be reported only when:
 - a. An internal inspection is not possible because of construction (in which case report shall be marked "External" and the reason for making an external inspection shall be given);
 - b. Code violations or *unsafe conditions* are found.
5. The department must be notified within 30 days of new business and *discontinuance of insurance* on forms acceptable to the department.
6. Reporting of periodic inspections shall be sent to the department in accordance with the department's EDI—Electronic Data Interface Transfer Guidelines.

CERTIFICATE OF INSPECTION

A *Permit to Operate* is issued by the department for boilers and pressure vessels upon payment of a \$50.00 fee. Refrigeration systems also require payment of a \$50.00 fee.

STATE FEES

1. Boilers – internal inspection:
 - a. Miniature – 0 to 20 square feet - **\$35.00**
 - b. Power boilers – 21 to 250 square feet - **\$80.00**
 - c. Power boilers – 251 to 1,000 square feet - **\$180.00**
 - d. Power boilers – 1,001 to 10,000 square feet - **\$240.00**
 - e. Power boilers – more than 10,000 square feet - **\$630.00**
 - f. Heating with manhole - **\$140.00**
 - g. Heating without manhole - **\$130.00**
 - h. Heating – multiple boilers in one building - **\$60.00/boiler** or **\$320.00/four-hour period**, whichever is less
2. Boilers – external inspection:
 - a. Miniature – 0 to 20 square feet - **\$35.00**
 - b. Power boilers – 21 to 250 square feet - **\$80.00**
 - c. Power boilers – 251 to 1,000 square feet - **\$120.00**
 - d. Power boilers – 1,001 to 10,000 square feet - **\$170.00**
 - e. Power boilers – more than 10,000 square feet - **\$290.00**
 - f. Heating with manhole - **\$60.00**
 - g. Heating without manhole - **\$60.00**
 - h. Heating – multiple boilers in one building - **\$60.00/boiler** or **\$320.00/four-hour period**, whichever is less
3. Pressure vessels:
 - a. Less than 12 cubic feet - No Fee
 - b. 12 through 200 cubic feet - **\$50.00**
 - c. 201 through 500 cubic feet - **\$120.00**
 - d. More than 500 cubic feet - **\$140.00**
 - e. Multiple pressure vessels in one building - **\$50.00/vessel** or **\$320.00/four-hour period**, whichever is less
4. Mechanical refrigeration systems:
 - a. Less than 3 tons - No Fee
 - b. 3 through 25 tons - **\$60.00**
 - c. 26 through 100 tons - **\$100.00**
 - d. 101 through 250 tons - **\$130.00**
 - e. 251 through 500 tons - **\$210.00**
 - f. 501 through 750 tons - **\$290.00**
 - g. 751 through 1,000 tons - **\$350.00**
 - h. More than 1,000 tons - **\$400.00**

5. Special and shop inspections (per hour):
 - a. Weekdays, plus expenses - **\$80.00**
 - b. Saturdays, Sundays, and holidays, plus expenses - **\$120.00**
 - c. ASME review and audit - **\$120.00**
6. Anhydrous ammonia storage plan review and external inspection - **\$700.00**
7. Anhydrous Ammonia Periodic Inspections Per Facility - **\$150.00**
8. Nurse tank NH₃ inspection:
 - a. 10 or fewer - **\$80.00**
 - b. 11 to 30 - **\$120.00**
 - c. 31 to 50 - **\$200.00**
 - d. More than 50 - **\$250.00**
9. Registration:
 - a. The installing contractor of a new or secondhand boiler, pressure vessel, or mechanical refrigeration system shall register the installation with the department before the installation is placed into operation.
 - b. Power piping: registration for any system exceeding 50 feet and over 2 inches NP size.

MISCELLANEOUS

1. Examinations for *Certificate of Competency* are held by the department on the first Wednesday in March, June, September, and December. An examination fee of \$250.00 is required. Applications must be received 20 days prior to examination date.
2. *Certificates of Competency* are renewed every four years for a fee of \$120.00.
3. *Reciprocal Certificates of Competency* are issued by the department for a fee of \$120.00 for inspectors holding *National Board Commissions*. Examinations for *Reciprocal Certificates of Competency* are held the second Tuesday of each month.
4. Welded repairs or alterations to boilers or pressure vessels shall be made in accordance with the *National Board Inspection Code* by a valid National Board "R" Stamp holder. All repairs and alterations including "routine repairs" shall be registered on the appropriate form with the National Board per SPS 341.62.
5. An operator's license is not required to operate a boiler or pressure vessel, except in some municipalities where licensing is mandated by local ordinance.
6. *Wisconsin Administrative Codes* and specific chapter SPS 341 Boiler and pressure vessel laws are available at: <https://docs.legis.wisconsin.gov/code/toc/sps>
7. Historical boiler requirements are provided in SPS-341, Subchapter IX.

WYOMING

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STATE DEPARTMENT

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EMPOWERMENT

Boiler Board: No.

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. ASME Code (1968 Edition), Section VIII (Divisions 1, 2, 3) required for pressure vessels.
2. Federal Occupational Safety and Health Administration requirements from the Code of Federal Regulations, 29 CFR 1910 (1910.106) and (1910.169).
3. API-510 (1966 Edition).
4. All air receivers shall be constructed in accordance with the 1968 edition of the *ASME Boiler and Pressure Vessel Code*, Section VIII.

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required: ASME Code: U, U2, U3, UV.

MISCELLANEOUS

Wyoming state government does not employ boiler or pressure vessel inspectors nor does it have boiler or pressure vessel rules.

YUKON TERRITORY



IMPORTANT NOTICE: Every effort has been made to make this synopsis as accurate and complete as possible. However, jurisdictional laws, regulations and rules are subject to change without notice. As a result, the information contained herein is neither guaranteed nor warranted. User is advised to consult the jurisdiction's chief inspector before reaching any decision that may have critical impact or significant financial consequences.

TERRITORY DEPARTMENT

Government of Yukon
Public Safety Branch
P.O. Box 2703
Whitehorse, Yukon Territory Y1A 2C6
Canada

Telephone — 867.667.5765
867.667.5825
Fax — 867.393.6249

Express mail only:
2071 Second Avenue
Whitehorse, Yukon Territory
Y1A 1B2 Canada

EMPOWERMENT

The commissioner empowered to make regulations and prescribe forms under the ordinance.

Boiler Board: No.

DATE OF LAW PASSAGE: 1949

Date of latest amendment to law: November 1980.
Date rules and regulations implemented: 1949.
Date of latest rules and regulations: November 1980.
Territory statute: Revised Statutes of Yukon, Volume 1. Chapter 11. *Power Engineers, Boilers and Pressure Act.*

RULES FOR CONSTRUCTION AND STAMPING

Construction:

1. CSA: B51 (2003 Edition), B52 (2005 Edition), Z184 (1973 Edition), B139 (1976 Edition), B149 (1976 Edition).
2. ASME Code (2004 Edition), Sections I, II, III, IV, V, VI, VII, VIII (Divisions 1, 2), IX, X.
3. ANSI/ASME B31.1 (2004 Edition), B31.3 (2004 Edition), B31.4 (1974 Edition), B31.5 (1974 Edition), B16.5 (1968 Edition), K61.1, Z106.1 (1974 Edition).
4. Manufacturers must register with department and submit designs and specifications for approval before installation.
5. Special design or construction requires approval of the chief boiler inspector.
6. Secondhand boilers or pressure vessels shall not be sold, exchanged or otherwise disposed of, except to manufacturers or dealers, until owner has received permission from the chief boiler inspector.
7. Boilers or pressure vessels imported into the territory, previously used outside the territory, shall not be installed until approved by the chief boiler inspector.
8. Foreign codes: any design which has not been approved and registered must be submitted to the chief inspector for approval and registration of the design.
9. *National Board Inspection Code* (Current Edition, Current Addendum).

Stamping:

Where appropriate, the following National Board stamps or ASME Code symbol stamps are required:

1. National Board: R (accepted).
2. ASME Code: all.

OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING

All steam boilers and pressure vessels, except the following:

1. Boilers subject to inspection under *Canada Shipping Act* of 1934.
2. Boilers used for heating private residences housing fewer than three families.
3. Hot-water boilers with a capacity not exceeding 3 cubic feet and developing less than 2 hp in a school, hospital, church, theater, hall, auditorium or building where the public assembles (5 hp in any place other than the above).
4. Boilers and pressure vessels forming part of railway equipment under the *Railway Act*.
5. Pressure vessels required to be inspected under *Explosives Act*.
6. Portable compressors.

OBJECTS SUBJECT TO RULES FOR FIELD INSPECTION

Same as OBJECTS SUBJECT TO RULES FOR CONSTRUCTION AND STAMPING.

INSPECTIONS REQUIRED

1. High-pressure boilers: one annual internal and external inspection.
2. Low-pressure boilers: one biennial internal inspection.

INSURANCE INSPECTION REQUIREMENTS

Inspections made by inspectors employed by insurance companies are not accepted in lieu of inspections made by a department inspector.

CERTIFICATE OF INSPECTION

Certificate of Inspection is issued by the inspector.

TERRITORY FEES

Territorial inspection fees vary according to boiler horsepower and cubic volume of pressure vessels.

MISCELLANEOUS

Operators of boilers and pressure vessels are required to be licensed.