PROPOSED RULES

NORTH DAKOTA ADMINISTRATIVE CODE
ARTICLE 45-12
NORTH DAKOTA BOILER RULES

CHAPTER 45-12-01
DEFINITIONS

Subsections 1, 4, 5, and 23 of Section 45-12-01-01 – Definitions are amended as follows:

1. "Alteration" means a ~~structural modification of or a departure from an original or existing construction~~ change in an item described on an original manufacturer's data report which affects the pressure retaining capability of the pressure retaining item. An alteration includes nonphysical changes such as an increase in the maximum allowable internal or external working pressure, an increase in design temperature, or a reduction in minimum temperature. For boilers used in the power generation industry exceeding one hundred thousand pounds of steam per hour output, increases in steaming capacity shall not be considered an alteration if a new baseline steaming capacity is established based on either an engineering evaluation or a review of the operating history and a conditional assessment of the boiler and its components. An engineering evaluation or conditional assessment must be made by the boiler owner with review and comment by the authorized inspection agency responsible for the in-service inspection of the boiler. Engineering evaluations and conditional assessments are subject to the review and approval of the chief boiler inspector.

4. "A.S.M.E. code" means the boiler and pressure vessel construction code of the American society of mechanical engineers of which sections I, II, IV, V, VIII (divisions 1 and 3), IX, and X, ~~2007~~ 2010 edition and section VIII, (division 2), 2004 edition, are hereby adopted by the commissioner and incorporated by reference as a part of this article. A copy of the American society of mechanical engineers code is on file at the office of the boiler inspection program. The American society of mechanical engineers code may be obtained from the American society of mechanical engineers headquarters at 3 park avenue, New York, New York 10016-5990.

5. "Boiler" means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under

pressure or vacuum for use externally to itself by the direct application of heat from the combustion of fuels or from electricity or nuclear energy. The term boiler includes fired units for ~~heating or~~ vaporizing liquids other than water when these units are separate from processing systems and are complete within themselves, as provided under North Dakota Century Code section 26.1-22.1-01.

23. "National board inspection code" means the manual for boiler and pressure vessel inspectors supplied by the national board. The national board inspection code, ~~2007~~ 2011 edition, is hereby adopted by the commissioner and incorporated by reference as a part of this article. Copies of this code may be obtained from the national board at 1055 crupper avenue, Columbus, Ohio 43229.

History: Effective June 1, 1994; amended effective April 1, 1996; January 1, 2000; October 1, 2002; January 1, 2006; January 1, 2008; April 1, 2010; _____, 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

CHAPTER 45-12-03
GENERAL REQUIREMENTS

Section 45-12-03-01.1 – Boiler Inspection Fees is amended as follows:

45-12-03-01.1. Boiler inspection fees. The following will be charged for boiler inspections:

1. High pressure boilers.

a. Internal inspections.	Fee	
- 50 square feet [4.65 square meters] or less of heating surface	~~$60.00~~	$80.00
- Over 50 square feet [4.65 square meters] and not over 500 square feet [46.45 square meters]	~~$70.00~~	$100.00
- Over 500 square feet [46.45 square meters] and not over 4,000 square feet [371.61 square meters]	~~$80.00~~	$120.00
- Over 4,000 square feet [371.61 square meters] of heating surface	~~$90.00~~	$150.00

b. External inspections.

- 50 square feet [4.65 square meters] of heating surface or less; 100 KW or less	~~$40.00~~	$60.00
- Over 50 square feet [4.65 square meters] of heating surface; over 100 KW	~~$50.00~~	$80.00

c. Portable oil field boilers. Internal and external inspections of portable oil field boilers must be charged inspection fees of seventy-five dollars per hour, including travel time, plus expenses for meals, mileage and lodging at current state rates.

2. Low pressure boilers.

a. Internal inspections.

- Without manway	~~$60.00~~	$75.00
- With manway	~~$70.00~~	$85.00

b. External inspections.

- Hot water heat and low pressure steam	~~$40.00~~	$50.00
- Hot water supply	~~$25.00~~	$35.00
~~- Additional boilers at same account for same day inspection (account = same owner, management firm, user, etc.)~~	~~$35.00~~	

3. Steam traction engines.

- Internal	~~$50.00~~	$60.00
- External	~~$45.00~~	$55.00
- Hydrostatic test	~~$55.00~~	$70.00
- Ultrasonic survey, per hour	~~$40.00~~	$60.00

4. ~~Multiple boiler fee cap. Inspection fees for the same account, per day, must be as stated in this fee schedule, or at the flat rate of four hundred dollars, whichever is less. This is in addition to the certificate fee noted in subsection 5.~~

~~5.~~	Certificate fee, per certificate as required by North Dakota Century Code section 26.1-22.1-10	$20.00, per year of certificate issued

History: Effective June 1, 1994; amended effective January 1, 2000; October 1, 2002; , 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

Section 45-12-03-16 – Boiler Logs is amended as follows:

45-12-03-16. Boiler logs. A log must be kept as to all repairs made, unusual incidents, accidents, water tests, amounts, types, and dates of water treatment. Logs for hobby boilers must also include operating hours, operators, fusible plug installation dates, safety valve tests, and apprentice operator training data.

History: Effective June 1, 1994; amended effective , 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

CHAPTER 45-12-04
POWER BOILERS – NEW INSTALLATIONS

Section 45-12-04-01 – Requirements is amended as follows:

45-12-04-01. Requirements.

1. All new boilers, except those exempt by law, to be installed in North Dakota must be reported to the chief boiler inspector by the owner or user and by the installer.

2. After July 1, 1973, power boilers that are not exempt by law may not be installed in this state unless they have been constructed, inspected, and stamped in conformity with the applicable edition of the American Society of Mechanical Engineers Code for power boilers and are approved, registered, and inspected in accordance with the requirements of this article.

3. A boiler having the standard stamping of another state or province of Canada that has adopted a standard of construction equivalent to the standard of North Dakota may be accepted by the chief boiler inspector if the person desiring to install the boiler makes application for the installation and files with the application the manufacturer's data report covering the construction of the boiler.

History: Effective June 1, 1994; amended effective _____, 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

Section 45-12-04-02 – Appurtenances – Piping and Tests is amended as follows:

45-12-04-02. Appurtenances - Piping and tests.

1. The inspector shall inspect all boilers and connected appurtenances for their safe operation and all pressure piping connecting them to the appurtenances and all piping up to and including the first stop valve, or the second stop valve when two are required.

2. Any pressure piping to the boiler, such as water column, blowoff valve, feedwater regulator, super heater, economizer, stop valves, etc., which are shipped connected to the boiler as a unit, must be hydrostatically tested with the boiler and witnessed by an inspector.

3. All economizers ~~and super heaters~~, whether separately fired or not, and ~~whether~~ when located within the scope of boiler external piping ~~or not~~, must be constructed to section I of the American Society of Mechanical Engineers Code. All superheaters must be constructed to section I of the American Society of Mechanical Engineers Code.

4. The chief boiler inspector may waive American society of mechanical engineers section I boiler external piping requirements for new and secondhand boilers of less than forty horsepower output if the boiler external piping is mechanically installed (i.e., no welding), the piping does not exceed two-inch [5.08 centimeters] national pipe standard in size, the piping is schedule eighty minimum, and the boiler maximum allowable working pressure does not exceed one hundred fifty pounds per square inch [1034.22 kilopascals] gauge.

History: Effective June 1, 1994; amended effective October 1, 2002; _____, 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

CHAPTER 45-12-05
POWERS BOILERS – EXISTING INSTALLATIONS

Subsection 5 of Section 45-12-05-02 – Maximum Allowable Working Pressure for Nonstandard Boilers is amended as follows:

45-12-05-02. Maximum allowable working pressure for nonstandard boilers.

. . .

5. The following factors of safety must be increased by the inspector if the condition and safety of the boiler demand it:

. . .

Reinstalled or secondhand boilers must have a minimum factor of safety of six when the longitudinal seams are of lap-riveted construction, and a minimum factor of safety of five when the longitudinal seams are of butt-and-double-strap construction. ~~Seam~~ Steam traction engines must be considered as secondhand boilers for purposes of determining their factors of safety.

History: Effective June 1, 1994; amended effective , 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

Subsection 8 of Section 45-12-05-12 – Operation is amended as follows:

8. If the operating conditions of a valve are changed so as to require a new spring under subsection 1 for a different pressure, the valve must be adjusted by the manufacturer ~~or~~, the manufacturer's authorized representative, or by a holder of a valid national board "VR" certificate who shall furnish and install a new nameplate.

History: Effective June 1, 1994; amended effective , 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

CHAPTER 45-12-09
HEATING, LOW PRESSURE, AND HOT WATER SUPPLY BOILERS - EXISTING INSTALLATIONS

Subsection 4 of Section 45-12-09-11 – Feedwater Connections is amended as follows:

4. There must be a stop valve and a check valve in the feedwater line at the boiler. For hot water heating boilers, the check valve must be a backflow preventer approved by the State Plumbing Code, ~~2000~~ 2009 edition.

History: Effective June 1, 1994; amended effective January 1, 2000; October 1, 2002; , 2012.
General Authority: NDCC 26.1-22.1-14

Law Implemented: NDCC 26.1-22.1-14

CHAPTER 45-12-10
UNFIRED PRESSURE VESSELS

Section 45-12-10-01 – Construction and Installation Standards – Exceptions is amended as follows:

45-12-10-01. Construction and installation standards - Exceptions. Unfired pressure vessels may not be installed in North Dakota unless such vessels have been constructed in accordance with the American society of mechanical engineers boiler and pressure vessel code, section VIII, division 1 or 3, ~~2007~~ 2010 edition or section VIII, division 2, 2004 edition, and bear the "U" stamp as proof of such construction.

Manufacturers shall register unfired pressure vessels with the national board of boiler and pressure vessel inspectors. Unfired pressure vessels must bear the required stamping of the national board.

The requirements of this section apply to all pressure vessels within the scope of the American society of mechanical engineers boiler and pressure vessel code, section VIII, division 1 or 3, ~~2007~~ 2010 edition or section VIII, division 2, 2004 edition, with these exceptions:

. . .

4. Unfired pressure vessels installed or ordered prior to November 1, 1987. However, these unfired pressure vessels must be maintained in a safe operating condition using ANSI/NB-23 and ANSI/API-510 as guidelines. Unfired pressure vessels referenced by this section must be protected with the American society of mechanical engineers stamped pressure relief devices as defined in section VIII of the American society of mechanical engineers boiler and pressure vessel code, ~~2007~~ 2010 edition. Existing pressure relief devices installed on unfired pressure vessels referenced by this section will be considered acceptable if the pressure relief device is set for the correct pressure, if the usage is correct, and if the device is in a satisfactory operating condition.

History: Effective June 1, 1994; amended effective April 1, 1996; January 1, 2000; October 1, 2002; January 1, 2006; April 1, 2010; _____, 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14

Section 45-12-10-02 – Application of Standards – Repairs is amended as follows:

45-12-10-02. Application of standards - Repairs. These rules apply only to new construction, except as noted below:

. . .

2. . . .

c. The national board inspection code and the American petroleum institute code (ANSI/API-510, ~~2004~~ 2006 edition) cover repair and alteration procedures. ANSI/API-510 may be used to cover the maintenance inspection, repair, alteration, and rerating procedure for pressure vessels used by the petroleum and chemical process industries. It is intended that ANSI/NB-23 cover installations other than those covered by ANSI/API-510.

History: Effective June 1, 1994; amended effective April 1, 1996; January 1, 2000; October 1, 2002; January 1, 2006; January 1, 2008; , 2012.
General Authority: NDCC 26.1-22.1-14
Law Implemented: NDCC 26.1-22.1-14