

**CHAPTER 90**

**BOILERS, PRESSURE VESSELS AND REFRIGERATION**

**Authority**

N.J.S.A. 34:1-20, 34:1-47, 34:1A-3 and 34:7-18; and Reorganization Plan No. 002-2002.

**Source and Effective Date**

R.2010 d.243, effective October 1, 2010.  
See: 42 N.J.R. 1130(a), 42 N.J.R. 2635(a).

**Chapter Expiration Date**

In accordance with N.J.S.A. 52:14B-5.1b, Chapter 90, Boilers, Pressure Vessels and Refrigeration, expires on October 1, 2017. See: 43 N.J.R. 1203(a).

**Chapter Historical Note**

Chapter 90, Boilers, Pressure Vessels and Refrigeration, was filed and became effective prior to September 1, 1969. Amendments became effective March 11, 1976 as R.1976 d.79. See: 8 N.J.R. 41(a), 8 N.J.R. 197(c). Chapter 90, Boilers, Pressure Vessels and Refrigeration, was repealed and new rules became effective December 17, 1984. See: 16 N.J.R. 1172(a), 16 N.J.R. 3454(a).

Pursuant to Executive Order No. 66(1978), Chapter 90, Boilers, Pressure Vessels and Refrigeration, was readopted as R.1990 d.24, effective December 15, 1989. See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Pursuant to Executive Order No. 66(1978), Chapter 90, Boilers, Pressure Vessels and Refrigeration, was readopted as R.1994 d.599, effective November 9, 1994. See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Pursuant to Reorganization Plan 002-1998, Chapter 90, Boilers, Pressure Vessels and Refrigeration, was recodified as N.J.A.C. 5:11, effective July 1, 1998. See: 30 N.J.R. 1347(a), 30 N.J.R. 2644(a).

Administrative change: Office of Boiler and Pressure Vessel Compliance changed to Bureau of Boiler and Pressure Vessel Compliance. See: 31 N.J.R. 1061(b).

Subchapter 7, Pressure Relief Valves, was adopted as new rules, and former Subchapter 7, Licensing of Operating Engineers and Boiler Operator, former Subchapter 8, Violations and Penalties, and former Subchapter 9, Standards and Publications Referred to in this Chapter, were recodified as Subchapters 8 through 10 by R.1999 d.304, effective September 7, 1999. See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Pursuant to Executive Order No. 66(1978), Chapter 11, Boilers, Pressure Vessels and Refrigeration, was readopted as R.1999 d.394, effective October 21, 1999. See: 31 N.J.R. 2024(a), 31 N.J.R. 3626(a).

Pursuant to Reorganization Plan No. 003-2002, Chapter 11 of Title 5, Boilers, Pressure Vessels and Refrigeration, was recodified as Chapter 90 of Title 12, effective February 5, 2003. See: 34 N.J.R. 4245(a), 35 N.J.R. 1275(b).

Chapter 90, Boilers, Pressure Vessels and Refrigeration, was readopted as R.2005 d.80, effective January 27, 2005. See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

Pursuant to Executive Order No. 1(2010), the chapter expiration date was extended from January 27, 2010 until the completion of the review of administrative regulations and rules by the Red Tape Review Group, and until such time as the extended regulation or rule was readopted pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. See: 42 N.J.R. 1130(a).

Chapter 90, Boilers, Pressure Vessels and Refrigeration, was readopted as R.2010 d.243, effective October 1, 2010. See: Source and Effective Date.

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SUBCHAPTER 1. GENERAL PROVISIONS

**12:90-1.1 Title and citation**

This chapter shall be known and may be cited as N.J.A.C. 12:90, Boilers, Pressure Vessels and Refrigeration.

**12:90-1.2 Authority**

These rules are promulgated pursuant to the authority of the Operating Engineers and Firemen Licensing Act, N.J.S.A. 34:7-1 et seq. and the Boiler, Pressure Vessel and Refrigeration Act, N.J.S.A. 34:7-14 et seq.

**12:90-1.3 Purpose**

(a) The purpose of this chapter is to provide reasonable standards for:

1. The protection of life and property in the use of boilers, pressure vessels and refrigeration systems; and
2. The licensing of engineers and boiler operators.

Amended by R.1999 d.304, effective September 7, 1999.  
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

In (a)2, substituted a reference to boiler operators for a reference to firemen.

**12:90-1.4 Scope**

(a) This chapter shall apply to:

1. The design, construction, alteration, repair, operation, use and inspection of boilers, pressure vessels and refrigeration systems; and
2. The examination and licensing of operating engineers, boiler operators and operators of long boom cranes.

Amended by R.1999 d.304, effective September 7, 1999.  
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

In (a)2, substituted a reference to boiler operators for a reference to firemen.

**12:90-1.5 Documents referred to by reference**

The availability of standards and publications referred to in this chapter is explained in N.J.A.C. 12:90-9.

Amended by R.1996 d.588, effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Changed N.J.A.C. reference.

**12:90-1.6 Validity**

Should any section, paragraph, sentence or word of this chapter be declared for any reason to be invalid, such decision shall not affect the remaining portions of this chapter.

SUBCHAPTER 2. DEFINITIONS

**12:90-2.1 Definitions**

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

“Act” (“Inspection Act”) means the Boiler, Pressure Vessel and Refrigeration Act, N.J.S.A. 34:7-14 et seq.

“Act” (“Licensing Act”) means the Operating Engineers and Firemen Licensing Act, N.J.S.A. 34:7-1 et seq.

“Alteration” means any change in the item described on the original manufacturer’s data report which affects the pressure containing capability of the boiler or pressure vessel. Nonphysical changes such as an increase in the maximum allowable working pressure (internal or external) or design temperature of a boiler or pressure vessel shall be considered an alteration. A reduction in minimum temperature such that additional mechanical tests are required shall also be considered an alteration.

“ANSI” means American National Standards Institute.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).  
Deleted a former (c).

**12:90-3.5 Licenses for low pressure boilers**

(a) This section shall apply to the licenses required to operate a low pressure boiler.

(b) A licensed person shall be required to operate a low pressure steam or hot water heating plant in which the rated capacity exceed 100 horsepower or 499 square feet of heating surface or 4,000,000 BTU input or 1,000 kilowatts regardless of pressure or temperature conditions, and only when the building or building being served is deemed occupied.

(c) A person with a low pressure license may operate low pressure boilers of unlimited horsepower.

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).  
Operation of boilers of unlimited horsepower permitted at (c).  
Amended by R.1994 d.599, effective December 5, 1994.  
See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).  
Amended by R.1997 d.537, effective January 5, 1998.  
See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

**12:90-3.6 (Reserved)**

**12:90-3.7 Licenses for power generating plants**

(a) This section shall apply to the various grades of licenses required to operate the steam driven prime movers in power generating plants.

(b) The chief engineer, shift engineer and boiler operator of a power generating plant should hold at least the licensed designated in Table 3.7.

**Table 3.7  
Licenses for Power Generating Plants**

Power Generating Plant Prime Mover		Chief Engineer's License <sup>(1)</sup>	Shift Engineer's License	Boiler Operator's License
horsepower over	horsepower not over	1-A	1-C	black seal
500 and over		gold seal 1st grade engineer	blue seal 3rd grade engineer	boiler operator in charge
100	500	1-B red seal 2nd grade engineer	1-C blue seal 3rd grade engineer	black seal boiler operator in charge
6	100	1-C blue seal 3rd grade engineer	1-C blue seal 3rd grade engineer	black seal boiler operator in charge <sup>(2)</sup>

Notes to Table  
(1) When required by N.J.A.C. 12:90-3.9(f), (g), (h) and (i).  
(2) When required for boiler operation.

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).  
Table 3.7 amended to add 1-C blue seal 3rd class engineer under shift engineer's license for horsepower over 6, but not over 100.  
Amended by R.1997 d.537, effective January 5, 1998.  
See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

**12:90-3.8 Licenses for refrigeration plants**

(a) This section shall apply to the various grades of licenses required to operate refrigeration plants using highly toxic, toxic or flammable refrigerants.

(b) The chief engineer or shift engineer of a refrigeration plant shall hold at least the license designated in Table 3.8.

**Table 3.8  
Licenses for Refrigeration Plants**

Refrigeration Plant Capacity		Chief Engineer's License <sup>(1)</sup> (2)	Shift Engineer's License <sup>(2)</sup>
tons over	tons not over	2-A	2-C
300 and over		gold seal 1st grade engineer	blue seal 3rd grade engineer
65	300	2-B red seal 2nd grade engineer	2-C blue seal 3rd grade engineer
24	65	2-C blue seal 3rd grade engineer	2-C blue seal 3rd grade engineer

Notes to Table  
(1) When required by N.J.A.C. 12:90-3.9(g), (h) and (i).  
(2) When steam driven prime movers are employed as part of the refrigeration plant, the engineer shall hold the appropriate engineer's license.

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).  
Stylistic changes.  
Amended by R.1997 d.537, effective January 5, 1998.  
See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).  
Amended by R.1999 d.304, effective September 7, 1999.  
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).  
In (a), inserted a reference to highly toxic refrigerants.

**12:90-3.9 Chief engineer and scope of certain licenses**

(a) When more than one licensed person is required to operate a high pressure boiler, refrigeration plant or power generating plant, whether or not the operators are employed on the same shift, the management of the plant shall designate one lead person, commonly called a chief engineer to establish responsibility for operations. Chief engineers are not required for low pressure plants.

(b) The engineer designated as chief engineer shall be permitted to serve as chief engineer in one plant location only and must be a full-time employee of the company responsible for the operation of the high pressure boilers, power generating or refrigeration plants. In the case where the chief engineer is a contract employee, the employee shall be under full time control of facility management responsible for the equipment. The designation shall be in writing and be on file at the plant location where the chief engineer is employed.

(c) The designated chief engineer may also be a shift engineer.

(d) The chief engineer designated in (a) above shall hold the proper grade and classification of license as provided by N.J.A.C. 12:90-3.4 through 3.8.

(e) The Bureau of Boiler and Pressure Vessel Compliance may recognize an engineer holding a license one grade lower than that required to serve as acting chief engineer on a temporary basis provided:

1. Every reasonable effort has been made by the employer to obtain a properly licensed chief engineer;
2. The candidate has submitted an acceptable application for examination for the higher grade license;
  - i. The requirement of (e)2 above may be waived for acting chief status if it is based upon an increase in plant size which mandates a higher grade license as provided in N.J.A.C. 12:90-3.4 through 3.8, but it shall not exceed the period established in the eligibility requirements for the higher grade license; and
3. The employer has submitted a request in writing for the acting chief engineer status.

(f) A boiler operator holding a boiler operator in charge license may act as chief engineer of an installation of 500 boiler horsepower or less. He or she may assume charge of a shift, under the supervision of a properly licensed chief engineer, in installations not over 1,000 boiler horsepower. When the total capacity exceeds 1,000 boiler horsepower, he or she may act as boiler operator, under the direction of, and responsible to, a properly licensed engineer in charge of his or her shift. (See Tables 3.4 and 3.7)

(g) An engineer holding a C or third grade license of the proper classification may act as chief engineer of any plant where the total capacity of the equipment involved does not exceed 1,000 boiler horsepower, 100 engine horsepower or 65 tons refrigerating capacity. He or she may also act as operating engineer, under the supervision of a properly licensed chief engineer, in installations exceeding the above limits. (See Tables 3.4, 3.7 and 3.8)

(h) An engineer holding a B or second grade license of the proper classification may act as chief engineer of any plant where the total capacity of the equipment involved does not exceed 3,000 boiler horsepower, 500 engine horsepower or 300 tons refrigerating capacity. He or she may also act as operating engineer, under the supervision of a properly licensed chief engineer, in installations exceeding the above limits. (See Tables 3.4, 3.7 and 3.8)

(i) An engineer holding an A or first grade license of the proper classification may act as chief engineer in any plant. See Tables 3.4, 3.7 and 3.8)

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Full-time employee requirement added at (c).  
Amended by R.1994 d.599, effective December 5, 1994.  
See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Amended by R.1997 d.537, effective January 5, 1998.  
See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

Deleted former (b); recodified (c) through (j) as (b) through (i); in (b), inserted a second sentence; and inserted (e)2i.

#### 12:90-3.10 Duties of licensed persons

(a) This section shall apply to the duties of persons licensed in accordance with this chapter.

(b) Licensed persons on watch shall give constant attention and remain within sight and/or natural sound of high pressure boilers and refrigeration plants or be stationed in a control room where the licensed person has direct and immediate intervention capabilities.

(c) Each low pressure boiler operator shall not jeopardize the safe operation of a low pressure heating boiler and shall remain on the premises.

(d) The length of time that the licensed person can be away from the equipment varies according to its nature, size and load conditions. At a minimum, the operator shall monitor the conditions of the low pressure boiler plant at least once every two hours, consistent with the requirements set forth in N.J.A.C. 12:90-3.5.

(e) The owner or management shall not require a licensed person to stay away from the equipment to the detriment of the safe operation of the equipment described in (b) and (c) above.

(f) A boiler operator's log shall be maintained in each plant containing over 100 horsepower. Every operator on the shift shall review the log and, at the end of each shift, shall sign the log. All logs shall include the date, name of the operator(s) on duty, and time of relief. Any personnel who are training to obtain their licenses under the requirements of N.J.A.C. 12:90-8.4 shall include within the log the actual time spent as a trainee. When the operator of a low pressure plant is not in the boiler room, as permitted in (c) above, the operator shall indicate in the log periodic tours of the boiler plant as required in (d) above.

1. High pressure boiler operator logs shall contain at a minimum the information as outlined in ASME Section VII, Recommended Guidelines for the Care and Operation of Power Boilers, paragraph 6.632, incorporated herein by reference.

2. Low pressure boiler operator logs shall contain at a minimum the information as outlined in ASME Section VI, Recommended Guidelines for the Care and Operation of Heating Boilers, paragraph 6.09(b), incorporated herein by reference.

3. The boiler operator's logbook shall be kept in a hardbound book of the consecutively numbered type. In lieu of a hardbound book, the log may be kept on electronic media recording devices and be accessible for review or printing upon request.

4. Other pertinent data referenced by the above noted ASME Guidelines means information that would impact the normal safe operations of a plant.

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Requirement to remain on the premises added at (c).  
Amended by R.1994 d.599, effective December 5, 1994.

See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Amended by R.1996 d.588, effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Amended by R.1997 d.537, effective January 5, 1998.

See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

Rewrote (b); in (d) added a second sentence; and added (f).

Amended by R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Rewrote (c); in (d), deleted a reference to (c), substituted a reference to low pressure boiler plants for a reference to boiler plants, and changed N.J.A.C. reference; and in (f), changed N.J.A.C. reference in the introductory paragraph, and rewrote the first sentence in 3.

Administrative change.  
See: 31 N.J.R. 3626(b).

### 12:90-3.11 Duties of others involved

(a) Each person involved with equipment within the scope of this chapter including, among others, engineers, contractors, suppliers, owners, or operators shall:

1. Be conversant with this chapter;
2. Have all required certificates and licenses posted in a conspicuous place and available for inspection at all times; and
3. Ensure that all boiler and pressure vessels under the scope of N.J.S.A. 34:7-14 through 7-26 are registered with the Bureau of Boiler and Pressure Vessel Compliance and/or the National Board of Boiler and Pressure Vessel Inspectors.

(b) Users of boilers, pressure vessels, refrigeration systems and other equipment subject to the inspection and licensing acts, shall be guided by their authorized inspectors relative to the jurisdiction of the Bureau of Boiler and Pressure Vessel Compliance for purposes of registration, certification, licensing, repairs and alterations.

(c) No person shall contract for or purchase new or used boilers or unfired pressure vessels which do not comply with the applicable ASME Code except as provided for in N.J.A.C. 12:90-5.3 through 5.10. The applicable ASME Code shall be specified in such transactions.

(d) When writing the Bureau of Boiler and Pressure Vessel Compliance in reference to a boiler, unfired pressure vessel, refrigeration plants or other equipment, the New Jersey State inspection registration number in the upper left corner of the registration certificate, the manufacturer's serial number, the National Board number and the name of the manufacturer shall be stated in the correspondence.

(e) Following an occurrence to a boiler or pressure vessel, the owner or user shall promptly notify the Chief of the Bureau of Boiler and Pressure Vessel Compliance by submit-

ing a detailed report of the occurrence. In the event of a personal injury or any explosion, notice shall be given immediately to the Chief of the Bureau of Boiler and Pressure Vessel Compliance by telephone or by facsimile or by any other expeditious electronic notification method. The telephone number for these notices is (609) 984-0626. The telefacsimile number for these notices is (609) 984-1577. Neither the boiler or pressure vessel, nor parts thereof, shall be removed or disturbed before permission has been given by the Chief, except for the purpose of saving human life and limiting consequential damage.

Amended by R.1994 d.599, effective December 5, 1994.

See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Amended by R.1997 d.537, effective January 5, 1998.

See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

Inserted (a)3; and deleted former (b).

Amended by R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Added (e).

Amended by R.2005 d.80, effective February 22, 2005.

See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

In (e), deleted "Inspector" following "Chief" throughout.

### 12:90-3.12 Qualification of inspectors

(a) Except as provided in (c) below, all inspectors shall be issued a Certificate of Competency after satisfactorily passing an examination based on this chapter and the references provided in N.J.A.C. 12:90-9. This Certificate of Competency is valid only while the inspector is in the employ of the authorized inspection agency indicated on the Certificate of Competency.

(b) Any inspector who shall perform boiler inspections under the requirements of N.J.A.C. 12:90-4.10 (and/or N.J.A.C. 12:90-5.14) shall receive a Certificate of Competency after submitting an application for a Certificate of Competency and meeting the following requirements:

1. An application for a New Jersey Certificate of Competency shall be completed in its entirety, signed and dated by the applicant, and the applicant's signature shall be notarized. The application shall include the applicant's name, address, city and state with zip code, county, telephone number, education, place of employment, National Board and other state commissions held and a statement of experiences. The application shall be accompanied by a \$100.00 application fee; and

2. A copy of the inspector's current National Board Commission card, if available, with a letter from the authorized inspection agency requesting the Certificate of Competency shall be submitted; and

3. A passing grade of at least 70 percent shall be obtained on a written examination administered by the Bureau of Boiler and Pressure Vessel Compliance.

(c) Any inspector whose duties shall be limited to shop inspections that require a New Jersey Certificate of Competency can apply for a "Shop Inspection" Certificate of Competency based solely on holding a valid Commission

issued by the National Board of Boiler and Pressure Vessel Inspectors. The application shall meet the following requirements:

1. An application for a New Jersey Certificate of Competency shall be completed, signed and dated by the applicant and this signature shall be notarized. The application shall include the applicant's name, address, city and state with zip code, county, telephone number, education, place of employment, National Board and other state commissions held and a statement of experiences. The application shall be accompanied by a \$100.00 application fee; and

2. A copy of the inspector's current National Board Commission card with a letter from the authorized inspection agency requesting the Certificate of Competency shall be submitted; if the inspector does not have a National Board Commission, a "Shop Inspection" Certificate of Competency can be issued upon notification from the National Board of Boiler and Pressure Vessel Inspectors that the applicant obtained a passing grade on the National Board examination, when such examination was taken in the State of New Jersey.

(d) Any inspector whose duties shall be limited to owner-user inspections under N.J.A.C. 12:90-5.12, 5.13 or 5.14 shall receive a Certificate of Competency after submitting an application for a Certificate of Competency and meeting the requirements under (d)1 through 3 below.

1. An application for a New Jersey Certificate of Competency shall be completed, signed and dated by the inspector, and this signature shall be notarized. The application shall include the applicant's name, address, city and state with zip code, county, telephone number, education, place of employment, National Board and other state commissions held and a statement of experiences. The application shall be accompanied by a \$100.00 application fee.

2. A copy of the inspector's current National Board Commission card or API Pressure Vessel Inspector Certification with a letter from the owner/user inspection agency requesting the Certificate of Competency shall be submitted.

3. A passing grade of at least 70 percent shall be obtained on a written examination administered by the Bureau of Boiler and Pressure Vessel Compliance.

4. Persons who hold an API Pressure Vessel Inspector Certification by means of API-510, Appendix B, Section B.2.2 and who have not passed a written examination as described in API-510, Appendix B, Section B.1 shall be limited to conducting field inspection of unfired pressure vessels as owner-user inspectors under N.J.A.C. 12:90-5.14 and shall not be qualified to approve pressure vessel repairs or alterations under N.J.A.C. 12:90-5.12 or conduct shop inspections under N.J.A.C. 12:90-5.13.

(e) Persons having a National Board Commission or an API Certification shall be tested only on their knowledge of New Jersey boiler, pressure vessel and refrigeration rules set forth in this chapter, as applicable to the functions for which application is made.

New Rule, R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Amended by R.2004 d.195, effective May 17, 2004.

See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

In (b)1, (c)1, and (d)1; substituted "\$50.00" for "\$25.00" preceding "application fee".

Amended by R.2006 d.191, effective May 15, 2006.

See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).

Substituted "\$100.00" for "\$50.00" in the last sentence of (b)1, (c)1 and (d)1.

### 12:90-3.13 Renewal of Certificates of Competency

(a) All Certificates of Competency shall be issued initially for a period of at least one year, expiring on December 1 of the following year.

(b) When applying for the renewal of a Certificate of Competency, the authorized inspection agency or owner/user inspection agency shall submit a renewal fee of \$40.00 for a one-year renewal or \$80.00 for a three-year renewal.

(c) Whenever a Certificate of Competency has not been renewed within three years of its expiration, the inspector shall be required to apply for a new Certificate of Competency, as set forth in N.J.A.C. 12:90-3.12.

(d) When transferring a Certificate of Competency from one authorized inspection agency to another authorized inspection agency, a \$20.00 transfer fee shall be submitted. The expiration date of the Certificate of Competency shall be retained.

(e) A Certificate of Competency may be revoked or suspended by the Commissioner upon receiving evidence of incompetence, negligence, intoxication while on duty, drug use or other reason establishing that the inspector is unfit to hold a Certificate of Competency, after notice is given to the inspector and a hearing afforded him or her before one or more members of the Examining Board. In case revocation or suspension is imposed, the inspector may appeal the determination in accordance with N.J.A.C. 12:90-9. The Commissioner may authorize the suspension of a Certificate of Competency in the interest of health and safety pending the outcome of the appeal.

New Rule, R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Amended by R.2004 d.195, effective May 17, 2004.

See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

In (b), substituted "\$20.00" for "\$10.00" preceding "for a one-year renewal" and "\$40.00" for "\$20.00" preceding "for a three-year renewal".

Amended by R.2006 d.191, effective May 15, 2006.

See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).

In (b), substituted "\$40.00" for "\$20.00" and "\$80.00" for "\$40.00"; and substituted "\$20.00" for "\$10.00" in (d).

## SUBCHAPTER 4. BOILERS

**12:90-4.1 Scope of subchapter**

(a) This subchapter shall apply to the design, construction, inspection, installation, repair and alteration of steam or hot water boilers, including, without limitation, model steam boilers, except as provided in (b) below.

(b) This subchapter shall not apply to:

1. Steam boilers having adequate relief devices set to discharge at a pressure not greater than 15 psig when such boilers serve dwellings of less than six family units or other dwellings with accommodations for less than 25 persons;
2. Hot water boilers having relief devices set to discharge at a pressure not greater than 160 psig and hot water boilers limited to temperatures not exceeding 250 degrees Fahrenheit when such boilers serve dwellings of less than six family units or other dwellings with accommodations for less than 25 persons;
3. Any steam or hot water boiler having less than 10 square feet of surface;
4. Any steam or hot water boiler having a heat input of less than 10 kilowatts or less than 40,000 BTU per hour;
5. Any steam or hot water boiler under the jurisdiction and control of the United States Government when actively regulated by a Federal agency; and
6. Any steam or hot water boiler used solely for the propulsion of a motor vehicle regulated by the Motor Vehicle Act, Title 39 of the Revised Statutes.

Amended by R.1990 d.24, effective January 16, 1990.

See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Requirements for dual purpose vessels added at (b).

Amended by R.1996 d.588, effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Deleted (a)7, relating to boilers used solely for building service regulated by N.J.A.C. 5:23-3.20.

Amended by R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

In (a), inserted a reference to model steam boilers.

**12:90-4.2 Compliance with referenced standards**

(a) Construction and installation of boilers used solely for building service are regulated by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-3.20, Mechanical Subcode. All boilers shall be maintained, altered, repaired and inspected in accordance with the standards referenced in (b) and (c) below. Except for boilers used solely for building service which are regulated by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-3.20, Mechanical Subcode, all boilers shall be constructed and installed in accordance with the standards referenced in (b) and (c) below.

(b) The applicable sections of the ASME Boiler and Pressure Vessel Code—current edition with addenda are

adopted as safety standards under this subchapter and shall apply according to the provisions listed below.

1. Section I, Power Boilers;
2. Section II, Material Specifications;
3. Section III, Nuclear Power Plant Components;
4. Section IV, Heating Boilers;
5. Section VI, Recommended Rules for Care and Operation of Heating Boilers;
6. Section VII, Recommended Rules for Care of Power Boilers;
7. Section IX, Welding and Brazing Qualifications;
8. Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components—Division 1;
9. Case Interpretation and Addenda of each section listed above, except as provided in (g) below.

(c) The National Board Inspection Code—1995 edition and all subsequent editions and addenda is adopted as the safety standard under this subchapter and shall apply according to the provisions thereof.

(d) Each person engaged in the design, construction, fabrication, installation, repair and alteration of boilers shall protect the public by complying with the standards prescribed in (b) and (c) above.

(e) Only standards relating to public safety (that is, substantive rules) are adopted by any incorporation by reference as prescribed in (b) and (c) above.

(f) Where any conflict occurs between the standards prescribed in (b) and (c) above and these rules, these rules shall prevail.

(g) All Sections of the ASME Code referenced in (b) above shall become mandatory six months after approval by the ASME Council as do published addenda and Code Cases unless specific exception is taken by the Bureau of Boiler and Pressure Vessel Compliance administratively subject to confirmation by the Board.

(h) A code of construction which is a national or international standard and is recognized by regulation and by the country of origin, when applicable, shall be acceptable as an alternate code of construction under this subchapter, provided that it has been fully and finally approved and accepted as an alternate code of construction by the NBBPVI.

Amended by R.1990 d.24, effective January 16, 1990.

See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Incorporations updated at (b) and (c).

Amended by R.1994 d.599, effective December 5, 1994.

See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Amended by R.1996 d.588, effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

In (a), amended to include all types of boilers and added exception; in (c) updated Code edition.  
Amended by R.1999 d.304, effective September 7, 1999.  
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).  
Added (h).

### 12:90-4.3 Classification of boilers

Boilers shall be classified as low pressure or high pressure boilers.

### 12:90-4.4 High pressure boilers

High pressure boilers shall comply with Section I, Power Boilers of the ASME Code.

### 12:90-4.5 Low pressure boilers

(a) Low pressure boilers shall comply with Section IV, Heating Boilers of the ASME Code.

(b) Existing low pressure boilers installed prior to the effective date of the standards referenced in (a) above may remain in use while the Bureau of Boiler and Pressure Vessel Compliance is in receipt of favorable and current inspection reports.

(c) Low pressure boilers as described in (b) above shall be converted before the next annual inspection to conform to the standards referenced in (a) above with regard to appliances, auxiliaries and safety devices.

(d) Each automatically fired hot water boiler falling within the terms of N.J.S.A. 34:7-14(a) shall have an automatic low-water fuel cutoff which has been designed for hot water boiler service when such boiler exceeds a heat input of 400,000 BTU per hour except that such low water cut off shall not be required for hot water supply boilers.

(e) When low pressure boilers are connected to a common header, the connections from each boiler having a manhole opening shall be fitted with two stop valves having adequate free-blow drains which shall be located between the stop valves.

1. One of these stop valves shall be placed as near the boiler nozzle as practicable and the other valve placed where the interconnection joins the common header.

2. Where such protection has not been provided in existing installations or where such stop valves may be omitted optionally on hot water boilers where full open internal inspection is less frequently performed, no entry shall be made through the manway for any purpose until all system boilers have been depressurized and vented.

Amended by R.1990 d.24, effective January 16, 1990.  
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).  
Amended by R.1994 d.599, effective December 5, 1994.  
See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).  
Amended by R.1996 d.588, effective December 16, 1996.  
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).  
In (d), added reference to boiler heat input.

### 12:90-4.6 Relief device settings

All boilers shall have relief devices set to discharge at the rated relieving capacity and pressure in accordance with the requirement contained in the applicable ASME Code.

Amended by R.1994 d.599, effective December 5, 1994.  
See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

### 12:90-4.7 Steam boiler blowdown tanks and receivers

(a) This section shall apply to the construction and installation of steam boiler blowdown tanks and receivers.

(b) Pressure or unvented blowdown tanks:

1. A blowdown tank subject to possible maximum steam boiler pressure shall be constructed for the boiler pressure and stamped ASME and registered with the National Board.

2. A blowdown tank shall be used whenever the blowdown from any steam boiler is disposed in a sewerage or other interconnected system, and placed between the boiler and the sewer or such system.

(c) Atmospheric or vented blowdown tanks:

1. The outlet from the blowdown tank shall be not less than twice the area of the boiler blowdown pipe and made to extend internally to within six inches of the bottom of the tank.

2. A vent pipe, at least twice the diameter of the inlet, shall lead to the outside atmosphere. Vents shall be as direct as possible to the outside atmosphere and discharge at a point not less than seven feet above grade. No valve, water pocket, or other obstruction shall be in this line.

(d) Construction of blowdown tanks:

1. The minimum metal thickness of blowdown tanks, whether of the pressure or atmospheric type, shall be not less than  $\frac{5}{16}$  inch.

2. All blowdown tanks, whether of the closed or vented type, shall have approved openings for cleaning and inspection, and shall be capable of a maximum discharge at 150 degrees Fahrenheit at five psig.

3. The capacity of blowdown systems shall be sufficient to prevent discharges from exceeding 150 degrees Fahrenheit at five psig.

(e) Centrifugal type separators:

1. Centrifugal type separators shall be built and stamped in accordance with the ASME Code and may be used as provided in (e)2 and (e)3.

2. Separators may be used when a safe point of discharge is available and the pressure and temperature conditions at the point of discharge need not be considered.

ii. In accordance with N.J.S.A. 34:7-26, any owner, lessee, seller or operator of any steam or hot water boiler or similar equipment specified in N.J.S.A. 34:7-14, pressure vessel or refrigeration system who shall sell, use, cause or allow to be used such steam or hot water boiler or similar equipment specified in N.J.S.A. 34:7-14, shall be liable to a penalty of not less than \$500.00 nor more than \$10,000 for each first offense and not less than \$500.00 nor more than \$25,000 for each subsequent offense, to be collected by a civil action, or at the Commissioner's discretion;

2. Actions affecting licenses issued pursuant to N.J.S.A. 34:7-3; and

3. Orders to discontinue use of an unfit vessel pursuant to N.J.S.A. 34:7-21.

(b) Any person aggrieved by a determination involving a license revocation or suspension under N.J.A.C. 12:90-4.16(e) shall be notified of a right to request a rehearing within 15 calendar days of the date of receipt of the determination.

(c) Any person aggrieved by a finding of violation and/or assessment of penalty made pursuant to N.J.S.A. 34:7-1 et seq., shall be notified of the right to appeal the determination to the Commissioner within 15 calendar days of receipt of the determination.

(d) Any person aggrieved by an order issued by the Bureau of Boiler and Pressure Vessel Compliance to discontinue use of an unfit vessel notified pursuant to N.J.S.A. 34:7-21 shall be notified of a right to appeal the determination to the Commissioner within 15 calendar days to the date of receipt of the order.

(e) An appeal must be in writing and received within 15 calendar days following the receipt of the notice or determination. All appeals shall be conducted pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1. An appellant may be represented by an attorney. If an appeal is not made, the notice shall become the Final Order of the Commissioner upon the expiration of the 15 calendar day period following receipt of the notice or determination.

Amended by R.2004 d.195, effective May 17, 2004.

See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

Rewrote (a)1.

#### 12:90-9.2 Settlements

Recipients of a notice or determination may request the initiation of a settlement conference at the time that an appeal is filed. If a party requests a settlement conference, or the Department determines that an informal settlement conference would be useful, a settlement conference shall be scheduled and conducted by the Department within 30 days of the receipt of the request or appeal. See N.J.A.C. 1:1-8.1(b).

#### 12:90-9.3 Final agency decisions

If a settlement is not obtained at the settlement conference, or a settlement conference is not conducted, the appeal shall be transmitted to the Office of Administrative Law (OAL) pursuant to the Administrative Procedure Act. The Commissioner shall issue a Final Order upon the conclusion of such proceeding.

#### 12:90-9.4 Enforcement

The Final Order may be enforced with costs in a summary proceeding commenced by the Commissioner.

#### 12:90-9.5 Appeals

Appeals from the final decision of the Commissioner shall be made to the Appellate Division of the New Jersey Superior Court.

### SUBCHAPTER 10. STANDARDS AND PUBLICATIONS REFERRED TO IN THIS CHAPTER

#### 12:90-10.1 Documents referred to by reference

(a) The full title and edition of each of the standards and publications referred to in this chapter are as follows:

1. ASME—1995 edition and all subsequent editions and addenda, Boiler and Pressure Vessel Code

Section I, Power Boilers

Section II, Material Specifications

Part A—Ferrous Material Specifications

Part B—Nonferrous Material Specifications

Part C—Specifications for Welding Rods, Electrodes and Filler Metals

Part D—Properties

Section III, Nuclear Power Plant Components

Subsection NCA—General Requirements for Division 1 and Division 2

Division 1—Subsection NB—Class 1 Components

Division 1—Subsection NC—Class 2 Components

Division 1—Subsection ND—Class 3 Components

Division 1—Subsection NE—Class MC Components

Division 1—Subsection NF—Component Supports

Division 1—Subsection NG—Core Support Structures

Division 1—Appendices

Division 2—Code for Concrete Reactor Vessels and Containments

Section IV, Heating Boilers

Section V, Nondestructive Examination

Section VI, Recommended Rules for the Care and Operation of Heating Boilers

Section VII, Recommended Guidelines for the Care of Power Boilers

**Section VIII, Pressure Vessels****Division 1****Division 2—Alternative Rules****Section IX, Welding and Brazing Qualifications****Section X, Fiber-Reinforced Plastic Pressure Vessels****Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components—Division I****All Code Cases, Interpretations and Addenda**

2. BOCA National Mechanical Code, 1993 edition and all subsequent editions and addenda, specifically including the revisions identified in the Conference Report of Final Action on 1994 Proposed Changes to the BOCA National Codes.

3. NBIC—National Board Inspection Code 1995 edition and all subsequent editions and addenda

4. N.J.S.A. 34:7-1 et seq., Operating Engineers and Firemen Licensing Act.

5. N.J.S.A. 34:7-14 et seq., Boiler, Pressure Vessel and Refrigeration Act.

6. New Jersey Uniform Construction Code, N.J.A.C. 5:23-3.20, Mechanical Subcode.

7. API-510, Pressure Vessel Inspection Code 1995 edition and all subsequent editions and addenda

8. ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers

9. ANSI/ASHRAE 15, Safety Code for Mechanical Refrigeration, 1994 edition and all subsequent editions and addenda.

10. ANSI/ASHRAE 34, Designation and Safety Classification of Refrigerants, 1997 edition and all subsequent editions and addenda.

Amended by R.1990 d.24, effective January 16, 1990.

See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).

Standards and publications citations updated.

Amended by R.1994 d.599, effective December 5, 1994.

See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Amended by R.1996 d.588, effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Amended by R.1999 d.304, effective September 7, 1999.

See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

In (a), rewrote 2, and added 9 and 10.

**12:90-10.2 Availability of documents for inspection**

A copy of each of the standards and publications referred to in this chapter is on file and may be inspected at the following office of the Division of Public Safety and Occupational Safety and Health between the hours of 9:00 A.M. and 4:00 P.M. on regular working days:

New Jersey Department of Labor and Workforce Development

Division of Public Safety and Occupational Safety and Health

PO Box 392

3rd Floor

Trenton, New Jersey 08625-0392

Amended by R.1996 d.588 effective December 16, 1996.

See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Amended by R.2005 d.80, effective February 22, 2005.

See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

**12:90-10.3 Availability of documents from issuing organizations**

Copies of the standards and publications referred to in this chapter may be obtained from the organizations listed below. The abbreviations preceding these standards and publications have the following meanings, and are the organizations issuing the standards and publications listed in N.J.A.C. 12:90-10.1.

**API—American Petroleum Institute**

Order Desk

1220 1 Street, Northwest

Washington, D.C. 20005

**ASHRAE—American Society of Heating, Refrigerating, and Air-Conditioning Engineers**

Publication Sales

1791 Tullie Circle NE

Atlanta, GA 30329

Phone Number: (404) 636-8400

Fax Number: (404) 321-5478

E-mail: orders@ashrae.org

**ASME—American Society of Mechanical Engineers United Engineering Center**

345 East 47th Street

New York, New York 10017

**BOCA—Building Officials and Code Administrators International**

4051 West Flossmoor Road

Country Club Hills, Illinois 60477

**NBBPVI—National Board of Boiler and Pressure Vessel Inspectors**

1055 Crupper Avenue

Columbus, Ohio 43229

**N.J.S.A.—New Jersey Statutes Annotated**

Copies available from:

Bureau of Boiler and Pressure Vessel Compliance  
PO Box 392

Trenton, New Jersey 08625-0392

New Jersey Uniform Construction Code—Bureau of Code Services

New Jersey Department of Labor and Workforce Development

Division of Public Safety and Occupational Safety and Health

PO Box 392

3rd Floor

Trenton, New Jersey 08625-0392

Amended by R.1996 d.588, effective December 16, 1996.  
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).  
Amended by R.1999 d.304, effective September 7, 1999.  
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

Changed N.J.A.C. reference in the introductory paragraph, and  
inserted ASHRAE address and phone numbers.  
Amended by R.2005 d.80, effective February 22, 2005.  
See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).