

CHAPTER 90**BOILERS, PRESSURE VESSELS
AND REFRIGERATION****Authority**

N.J.S.A. 34:1-20, 34:1-47, 34:1A-3(e) and 34:7-18.

Source and Effective Date

R.1994 d.599, effective November 9, 1994.
See: 26 N.J.R. 3810(a), 26 N.J.R. 4828(a).

Executive Order No. 66(1978) Expiration Date

Chapter 90, Boilers, Pressure Vessels and Refrigeration, expires on November 9, 1999.

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 Chapter 90 was repealed and new rules became effective December 17, 1984.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 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 was readopted as R.1994 d.599. See: Source and Effective Date. See, also, section annotations.

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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 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, firemen, and operators of long boom cranes.

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. 12:90-8.

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.

“ANSI” means American National Standards Institute.

“API-ASME” means the American Petroleum Institute—American Society of Mechanical Engineers.

“Approved” means acceptable to the Commissioner of Labor.

“ASME” means the American Society of Mechanical Engineers.

“ASME Code” means the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers.

“Authorized inspection agency” means one of the following:

1. The State of New Jersey, or
2. An inspection agency authorized to write boiler and pressure vessel insurance and having inspectors that are authorized with a valid certificate of competency to inspect.

“Board” means the Board of Boiler and Pressure Vessel and Refrigeration Rules appointed under N.J.S.A. 34:1-38.1.

“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 external use by the direct application of heat. The term “boiler” shall include fired or waste heat units used for heating or vaporizing liquids other than water where these units are separate from processing systems and are complete within themselves.

1. “Low pressure boiler” means a boiler complying with N.J.A.C. 12:90-4.2(b)4.

2. “Heating boiler” means a steam or vapor boiler operating at a pressure not exceeding 15 psig, or a hot water boiler operating at a temperature not exceeding 250 degrees Fahrenheit.

3. “Hot water heating boiler” means a boiler in which no steam is generated, from which hot water is circulated for heating purposes and then returned to the boiler; and which operates at a pressure not exceeding 160 psig or a temperature of 250 degrees F or both at or near the boiler outlet.

4. “High pressure boiler” means a power boiler in which steam or other vapor is generated at a pressure of more than 15 psig. High pressure boiler also means a high temperature, high pressure water boiler or heat recovery steam generator.

5. “High temperature water boiler” means a water boiler operating at a pressure exceeding 160 psig or a temperature exceeding 250 degrees Fahrenheit.

6. "Heat recovery steam generator" means a high pressure boiler in which steam or other vapor is generated and where steam is super heated. The term "heat recovery steam generator" shall include both fired and indirect fired units whose heat source is derived from duct burners and/or waste exhaust gasses.

"Boiler horsepower" means the evaporation of 34.5 pounds of water from and at 212 degrees Fahrenheit or its equivalent and in the absence of reliable means of determination shall mean five square feet of boiler heating surface, or ten kilowatts input, or 40,000 Btu input.

"Btu" means a British thermal unit or the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

"Building of public assembly" means an assembly building, Use Group A, which is a place of assembly as defined by Section 302.0 of the BOCA Basic National Building Code-1984.

"Certificate of competency" means a certificate issued to a person who has passed the inspection examination prescribed by the Board.

"Certificate of inspection" means an inspection, the report of which is used by the chief boiler inspector as justification for issuing, withholding or revoking the certificate as provided for in N.J.S.A. 34:7-24.

"Chief engineer" means a properly licensed person supervising one or more of the licensed operators of boilers, power plants or refrigeration systems working in the same plant.

"Commissioner" means the Commissioner of Labor or his authorized agent.

"Continuous processing operation" means a continuously operating processing or environmental control unit within the petroleum refining or chemical manufacturing industry where an associated boiler or similar equipment cannot be taken out-of-service outside of a scheduled, pre-planned periodic shut down of the entire continuous processing operation without incurring significant safety, environmental or economic harm.

"Division of Workplace Standards" means the Division of Workplace Standards of the New Jersey Department of Labor, CN 054, Trenton, NJ 08625-0054.

"Examiner" means an individual identified as a member of the examining board pursuant to N.J.S.A. 34:1-38.1.

"External inspection" means an inspection made when a boiler or pressure vessel is in operation.

"Fireman" means a boiler operator.

"Insurance company inspector" means an employee of an insurer who is trained and specializing in the inspection of boiler or pressure vessels for safety reasons to represent the interests of the insurer.

"Internal inspection" means as complete an examination as can reasonably be made of the internal surfaces of a boiler or pressure vessel when manhole plates, handhold plates, or other inspection opening closures are removed.

"Kilowatt" means a unit of electrical power equal to 1000 watts.

"License" means a certificate documenting acceptance of a person as competent to operate specified equipment.

"Long boom crane" means a hoisting machine with a boom length of over 99 feet.

"Mechanical Inspection Bureau" means the bureau established pursuant to N.J.S.A. 34:1-38.1 et seq. (1917) and is synonymous with the Office of Boiler and Pressure Vessel Compliance.

"National Board Commission" means the commission issued by the National Board of Boiler and Pressure Vessel Inspectors to a holder of a certificate of competency who desires to make shop or field inspections in accordance with the National Board for such commission.

"NBBPVI" means the National Board of Boiler and Pressure Vessel Inspectors.

"N.J.A.C." means the New Jersey Administrative Code.

"N.J.S.A." means the New Jersey Statutes Annotated.

"Occupied building" means a building which is occupied by persons other than custodial or security personnel. A building is not deemed to be occupied solely on the basis of attendance by custodial or security personnel.

"Office of Boiler and Pressure Vessel Compliance" means the Office of Boiler and Pressure Vessel Compliance of the Division of Workplace Standards, New Jersey Department of Labor, CN 392, Trenton, NJ 08625-0392.

"Owner or user" means any person, firm or corporation legally responsible for the safe operation of any boiler, pressure vessel, or refrigeration system.

"Pressure vessel" (See unfired pressure vessel).

"Prime mover" means a turbine, pump or other steam driven device which produces work (energy).

"Psig" means pounds per square inch gauge.

"Refrigeration system" means a system that is a combination of interconnected refrigerant containing parts constituting

ing one closed refrigerant circuit in which a refrigerant is circulated for the purpose of extracting heat.

"Shift engineer" means a properly licensed person operating a boiler, power plant or refrigeration system.

"Shop inspection" means an inspection performed when any boiler or pressure vessel is being constructed, fabricated or undergoing welded repair. Such inspections shall include National Board audits and joint reviews as required and assigned by the ASME and National Board.

"State inspector" means an employee of the Office of Boiler and Pressure Vessel Compliance who is authorized to inspect boilers or pressure vessels or other equipment.

"Total capacity" means the sum of the horsepower at ratings of all boilers comprising the system based on the minimum safety valve relieving capacity as required by the ASME Code.

"Unfired pressure vessel" means a vessel in which the pressure is obtained from an external source, or by the application of heat from a direct or indirect source.

"Water heater" means a closed vessel in which water is heated by a fuel supply and water is withdrawn for use external to the system at pressures not exceeding 160 psig and includes controls necessary to prevent water temperatures from exceeding 210° Fahrenheit.

"Welded repair" means a repair affecting the strength of a boiler or pressure vessel or other equipment.

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

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

"Examiner" and "fireman" added; "secondhand boiler or pressure vessel" deleted; "Mechanical Inspection Bureau" revised.

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

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

SUBCHAPTER 3. ADMINISTRATION

12:90-3.1 Scope of subchapter

This subchapter shall apply to the administrative functions required to be performed by the owner or user of any boiler, pressure vessel or refrigeration system within the scope of this chapter.

12:90-3.2 Right of entry

(a) For the purpose of examination or inspection of any boiler, pressure vessel, refrigeration system, power plant or other equipment, the Commissioner may enter such premises at all reasonable hours in accordance with N.J.S.A. 34:1-15.

(b) Any person, corporation or firm violating any provision of this section shall, for each offense, be liable for a penalty of \$50.00 pursuant to N.J.S.A. 34:1-16.

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

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

Penalty for violation added at (b).

12:90-3.3 Equipment requiring a licensed operator

(a) No person shall operate the equipment listed below without the appropriate license as specified in N.J.A.C. 12:90-3.4 through 3.8.

1. Any steam boiler, steam generator, hot water boiler for service over 250 degrees Fahrenheit, or similar equipment potentially capable of generating steam having a safety valve or valves set higher than 15 pounds per square inch gauge and rated over six horsepower;

2. A steam or hot water heating plant with an indicated or rated capacity that exceeds either 499 square feet of heating surface, or 100 boiler horsepower, or 1,000 kilowatts, or 4,000,000 Btu input regardless of pressure or temperature conditions only when the building or building being served is deemed occupied;

3. Any steam turbine, steam engine or other steam driven prime mover, rated over six horsepower;

4. Any refrigerating system using a refrigerant which is either flammable or toxic and rated over 24 tons of refrigerating capacity;

5. Any hoisting machine with a boom length exceeding 99 feet; or

6. Hot-oil generators or equipment using fluids other than water to produce steam indirectly.

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

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

Six tons changed to 24 tons in (a)4.

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

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

12:90-3.4 Licenses for high pressure boilers

(a) This section shall apply to the grades of licenses required to operate a high pressure boiler.

(b) The chief engineer and shift engineer of a high pressure boiler shall hold at least the license designated in Table 3.4.

Table 3.4

Licenses for High Pressure Boilers

Boiler horsepower over	Boiler horsepower not over	Chief Engineer's License (1)	Shift Engineer's License
		1-A gold seal 1st class engineer	1-C blue seal 3rd class engineer
	3,000		

Boiler		Chief Engineer's	Shift Engineer's
horsepower over 1,000	horsepower not over 3,000	License (1) 1-B red seal 2nd class engineer	License 1-C blue seal 3rd class engineer
500	1,000	1-C blue seal 3rd class engineer	black seal boiler operator in charge
100	500	black seal boiler operator in charge	black seal boiler operator in charge
6	100(2)	—	boiler operator special

Notes to Table

- (1) When required by N.J.A.C. 12:90-3.9.
 (2) Applies only to fully automatic boilers over six but not over 100 boiler horsepower.

(c) A fireman's special license for electric, coil or waste heat boilers may be issued for unlimited horsepower use, and may not be used for the operation of other types of boilers.

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

Restrictions on use of fireman's special license added at (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) No unlicensed person shall operate a low pressure steam or hot water heating boiler in which the rated capacity exceeds 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 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).

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 mover in power generating plants.

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

Table 3.7
Licenses for Power Generating Plants

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

Notes to Table

- (1) When required by N.J.A.C. 12:90-3.9.
 (2) If needed.

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.

12:90-3.8 Licenses for refrigeration systems

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

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

Table 3.8
Licenses for Refrigeration Systems

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

Notes to Table

- (1) When required by N.J.A.C. 12:90-3.9.
 (2) When steam driven prime movers are employed as part of the refrigeration system, the engineer shall hold the appropriate steam and refrigeration 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.

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 system, or power generating plant, whether or not the operators are employed on the same shift, the management of the plant shall designate a chief engineer. Chief engineers are not required for low pressure systems.

(b) A chief engineer may be called a supervising engineer in some plants.

(c) 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 systems. The designation shall be in writing and be on file at the plant location where the chief engineer is employed.

(d) The designated chief engineer may be a shift engineer holding a license of a grade required for a chief engineer.

(e) 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.

(f) The Office 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; and
3. The employer has submitted a request in writing for the acting chief engineer status.

(g) A fireman holding a fireman in charge license may act as chief engineer of an installation of 500 boiler horsepower or less. He 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 may act as fireman, under the direction of, and responsible to, a properly licensed engineer in charge of his shift.

(h) 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 may also act as operating engineer, under the supervision of a properly licensed chief engineer, in installations exceeding the above limits.

(i) 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 may also act as operating engineer, under the supervision of a properly licensed chief engineer, in installations exceeding the above limits.

(j) An engineer holding an A or first grade license of the proper classification may act as chief engineer in any plant.

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).

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 to high pressure boilers and refrigeration systems.

(c) Each licensed person shall remain on the premises and shall determine how long he can stay away from his equipment and not jeopardize the safe operation of a low pressure heating boiler.

(d) The length of time during which a licensed person can properly be away from the equipment of (c) above varies according to its nature, size and load conditions.

(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.

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).

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; and
2. Have all required certificates and licenses posted in a conspicuous place and available for inspection at all times.

(b) Manufacturer's data reports, specifications, drawings and calculations when required for boilers and unfired pressure vessels manufactured or used within the jurisdiction of this State shall be filed with the Office of Boiler and Pressure Vessel Compliance.

(c) 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 Office of Boiler and Pressure Vessel Compliance for purposes of registration, certification, licensing, repairs and alterations.

(d) No person shall contract for or purchase new or used boilers or unfired pressure vessels for which does not comply with the applicable ASME Code except as provided for in N.J.A.C. 12:90-5.3 through 5.9. The applicable ASME Code shall be specified in such transactions.

(e) When writing the Office of Boiler and Pressure Vessel Compliance in reference to a boiler, unfired pressure vessel, refrigeration system 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 ASME or National Board number and the name of the manufacturer shall be stated in the correspondence.

(f) When writing in reference to the ASME Code the edition, section, page and paragraph of the Code shall always be specified.

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

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, 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.

7. Any steam or hot water boiler used solely for building service regulated by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-3.20 (Mechanical Subcode).

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).

12:90-4.2 Compliance with referenced standards

(a) Steam or hot water 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. Other boilers shall be constructed, installed, maintained, altered, repaired and inspected 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—1992 is adopted as the safety standard under this subchapter and shall apply according to the provisions thereof, except that the following section shall not apply:

1. The third paragraph of the purpose and scope.

(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 Office of Boiler and Pressure Vessel Compliance administratively subject to confirmation by the Board.

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).

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 Office 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 except that such low water cutoff 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).

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 National Board, ASME, or New Jersey Standard.

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.

3. Separators may be used as an auxiliary to a blowdown tank but may not be used in lieu of a conventional

blowdown tank in those installations requiring a blowdown tank.

(f) Drawings of acceptable blowdown tanks and equipment:

1. Shown below are acceptable blowdown tanks and equipment as Figures 4.7(f)1 and 4.7(f)2.

(g) Repairs and alterations to blowdown tanks and separators shall be in accordance with N.J.A.C. 12:90-5.12.

Figure 4.7(f)1
Vertical Blowdown Tank for High Pressure Boiler

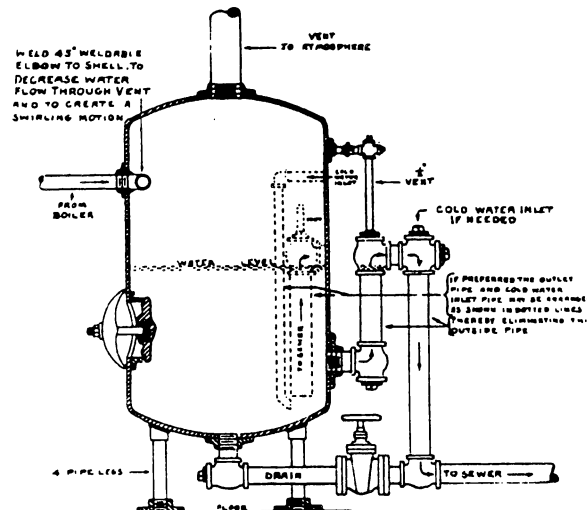
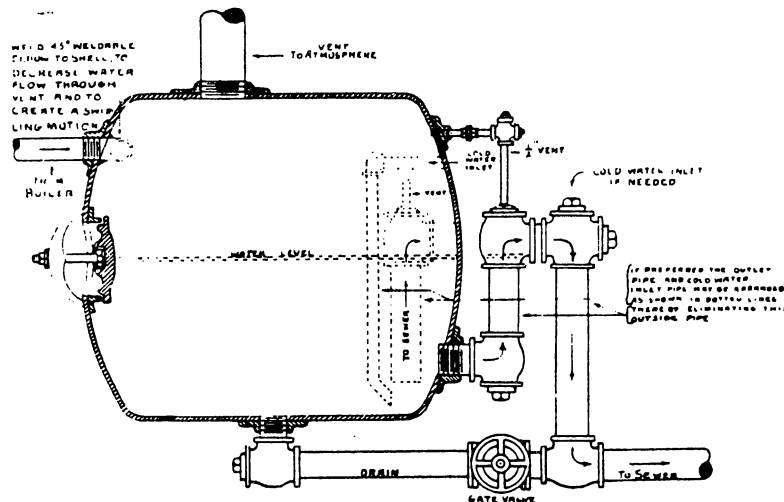


Figure 4.7(f)2
Horizontal Blowdown Tanks for High Pressure Boilers



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).

12:90-4.8 Welded repairs and alterations to boilers

(a) Welded repairs and alterations to boilers shall comply with:

1. The original construction standard, or

2. The construction standard referenced in N.J.A.C. 12:90-4.2(b) provided that requirement is not less stringent than the original construction standard, and

3. The National Board Inspection Code—1992 edition.

(b) Welded repairs to boilers shall be performed by a contractor possessing a valid and appropriate ASME Code symbol stamp or have National Board repair authorization or New Jersey repair authorization.

(c) The ASME Code validity of piping repairs shall be maintained to the boundaries defined in Section I, Power Boilers for high pressure boilers and to the required stop valve connection for low pressure heating boilers.

(d) All plans for welded repairs to boilers or connected piping shall be approved prior to the start of welded repairs by a National Board commissioned inspector with a valid New Jersey Certificate of Competency who is employed by an authorized insurance company or the State of New Jersey and performed under their guidance and certified at the completion of the welded repairs.

(e) A record of welded repairs shall be filed with the Office of Boiler and Pressure Vessel Compliance when requested.

(f) Alterations to boilers shall be performed by the appropriate Code symbol holder or a National Board Alteration Certificate holder.

(g) An alteration report and a copy of the original manufacturer's data report shall be filed with the National Board of Boiler and Pressure Vessel Inspectors or the Office of Boiler and Pressure Vessel Compliance if the boiler is not registered with the National Board. Fees for registration of these reports shall be \$2.00 for each boiler and shall be forwarded to the Office of Boiler and Pressure Vessel Compliance for registration.

1. When registered, one copy of the manufacturer's data report shall be returned to the user of the boiler.

2. If reports are not filed, the boiler shall be subject to State inspection and State inspection fees shall be assessed.

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

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

Incorporation of NBIC updated.

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

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

12:90-4.9 Qualification of authorized repair firms

(a) This section shall apply to the procedures required to obtain a New Jersey R symbol as a New Jersey authorized welded repair firm for welded repairs.

(b) A letter of application shall be addressed to the Office of Boiler and Pressure Vessel Compliance by a responsible officer of the firm requesting welded repair authorization. The letter of application shall identify the New Jersey address and location of the welded repair firm to be considered for authorization, and shall include evidence that an authorized inspection agency has agreed to provide inspection service as required.

(c) A review of the firm's facilities and quality control system shall be conducted jointly by an inspection specialist of the Office of Boiler and Pressure Vessel Compliance and a supervisory representative of the authorized inspection agency. The assigned shop inspector shall also be present during the review.

(d) The Office of Boiler and Pressure Vessel Compliance shall authorize the repair firm and, in conjunction with the authorized inspection agency of record, monitor the firm's repair activities in accordance with established administrative policy.

(e) Administrative policy guidelines shall be made available to applicants, users, inspection agencies, and other interested parties.

(f) Welded repairs performed by an authorized welded repair firm shall be deemed to preserve intact the validity of the original construction standard of the boiler upon which the work was performed while the boiler is in the State of New Jersey.

(g) Alterations or modifications altering the original design shall not be performed by the holder of a New Jersey repair certification, but shall be performed by an appropriate, qualified, ASME symbol stamp or National Board Alteration Certificate of Authorization holder.

(h) Welded repair shops shall be located within jurisdictional New Jersey.

(i) Nothing herein shall be intended to prohibit welded repair by an appropriate, qualified, ASME authorized shop or National Board welded repair firm or to require additional qualification of such shops under these rules.

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

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

Address and location requirements added.

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

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

12:90-4.10 Inspection of boilers

(a) All steam or hot water boilers or similar equipment potentially capable of generating steam as described in (b) below shall be inspected and be subjected to a hydrostatic test, if necessary, at least once each year at 12-month intervals. This inspection shall be a complete internal and external inspection as construction conditions will permit. All hot water heating boilers shall be inspected internally at 24-month intervals and shall be inspected externally every 12 months.

(b) Steam or hot water boilers subject to the inspection of (a) above shall include those listed in (b)1, (b)2 and (b)3 below, except as provided in (c) below:

1. Steam or hot water boilers having 10 or more square feet of heating surface;
2. Steam or hot water boilers having a heat input of 10 kilowatts or more; or
3. Steam or hot water boilers having a heat input of 40,000 Btu per hour or more.

(c) Steam or hot water boilers serving dwellings of less than six family units or other dwellings with accommodations for less than 25 persons need not comply with the annual internal and external inspection of (a) above.

(d) In addition to the annual internal and external inspection of (a) above, there may be an external inspection, if found necessary. This external inspection shall be made as near to the expiration of six months after the annual inspection date as practicable.

(e) Inspection shall be made more frequently if conditions warrant.

(f) The boiler to be inspected shall be open, clean, cool and ready for the inspector.

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

12:90-4.11 Ultrasonic testing

(a) The commissioner may accept ultrasonic test reports as a form of internal inspection for the purpose of compliance with N.J.S.A. 34:7-14 under certain specific instances upon receipt of application.

(b) Ultrasonic testing shall be considered under the following circumstances:

1. When it is operationally impractical to take the boiler out of service during the 12-month period;
2. If the user has a regularly scheduled, fulltime "in service" inspection program;
3. Ultrasonic inspection, in-lieu-of the annual out-of-service and open internal and external inspection, shall be accepted only when it is made within a 12-month period following the internal and external inspection or for a continuous processing operation when it is made within a 12-month period of the previous OB & PVC approved boiler inspection extension. The maximum period between out-of-service and open internal and external inspections shall not exceed 5 years;
4. The insurer or the authorized inspection agency indicates acceptance of the ultrasonic testing; and

5. A history of the boiler including such items as operational characteristics, results of inspections, corrosion rates and ultrasonic procedures shall be required.

6. The owner/user shall have a documented in-service inspection, operation and maintenance program. At the discretion of the OB & PVC, this program shall be subject to field audit prior to approval of the boiler inspection extension.

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

12:90-4.12 Fee and visit charge for shop inspection

(a) The fee for a shop inspection shall be the higher of either (a)1 or 2 below:

1. A fee of \$25.00 for each boiler inspected; or
2. A daily visit charge of \$160.00 for any shop inspection of four hours or less and \$300.00 for any shop inspection exceeding four hours.

(b) In addition to the inspection fee, the travel expenses of the inspector shall be paid at the time of the inspection.

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 pay inspector's travel expenses added at (d).
Amended by R.1991 d.609, effective December 16, 1991.
See: 23 N.J.R. 2948(a), 23 N.J.R. 3815(a).

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

12:90-4.13 Fee for field inspection

(a) An insurance company making an annual field inspection shall pay a fee of \$10.00 to the State, payable by and collected from the user by the inspector at the time of inspection for each boiler.

(b) The owner or user may request a field inspection by the State.

(c) The fee for a State field inspection for each annual internal-external inspection, which shall include a hydrostatic test if found necessary, shall be paid to the inspector as follows:

1. Ten and not over 60 square feet	\$25.00
2. 60 and not over 1,000 square feet	35.00
3. 1,000 square feet and over	50.00

(d) In addition to the inspection fee charged for a State field inspection, the travel expense of the inspector shall be paid at the time of inspection.

(e) In addition to the annual internal-external inspection, there may be an external inspection for which the owner or user shall pay to the State inspector a fee of \$25.00, in addition to the travel expense, at the time of the field inspection.

Administrative Correction to (c) and (e): Change in fees.
 See: 23 N.J.R. 2512(b).
 Amended by R.1991 d.609, effective December 16, 1991.
 See: 23 N.J.R. 2948(a), 23 N.J.R. 3815(a).
 Revised (a).

12:90-4.14 Registration of boilers

(a) Boilers shall be registered with the Office of Boiler and Pressure Vessel Compliance, and a State boiler inspection certificate shall be issued.

(b) Every boiler approved for use in the State shall be assigned a registration number, which shall be located in the upper left-hand corner of the boiler certificate.

1. This number shall also be attached to the front of the boiler in such a manner as to be plainly visible.

(c) The State boiler inspection certificate shall be properly framed and posted in the boiler room, engine room, engineer's office, or plant office and be readily available for examination.

(d) Damaged, altered, defaced or lost certificates must be replaced by request through the Office of Boiler and Pressure Vessel Compliance for replacement. The fee for replacement shall be \$8.00.

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

Inspection certificate requirements added at (a) and (d).

SUBCHAPTER 5. UNFIRED PRESSURE VESSELS

12:90-5.1 Scope of subchapter

(a) This subchapter shall apply to the design, construction, inspection, installation, repair and alteration of unfired pressure vessels, except as provided in (b) below.

(b) This subchapter shall not apply to:

1. Unfired pressure vessels having an internal or external operating pressure not exceeding 15 psig;
2. Unfired pressure vessels having an inside diameter not exceeding six inches;
3. Unfired pressure vessels used as a hot water supply tank heated by steam or any other indirect means when such unfired pressure vessels serve dwellings of less than six family units or other dwellings with accommodations for less than 25 persons when none of the following limitations on the unfired pressure vessel are exceeded:
 - i. A heat input of 200,000 Btu per hour;
 - ii. A water temperature of 200 degrees Fahrenheit;
 - iii. A nominal water capacity of 120 gallons.

4. Any unfired pressure vessel under the jurisdiction and control of the United States Government when actively regulated by a Federal agency;

5. Any unfired pressure vessel used solely for the propulsion of a motor vehicle regulated by the Motor Vehicle Act, Title 39 of the Revised Statutes;

6. Any unfired pressure vessel that does not exceed a design pressure of 300 psi and a design temperature of 210 degrees Fahrenheit containing water with air under pressure, the compression of which serves only as a cushion; and

7. Piping components from the first threaded, welded or flanged fitting.

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); vessel design specifications added at (c)6.

12:90-5.2 Compliance with referenced standards

(a) Unfired pressure vessels shall be constructed, installed, maintained, repaired and inspected 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 II, Material Specifications;
2. Section III, Nuclear Power Plant Components;
3. Section VIII, Unfired Pressure Vessels;
4. Section IX, Welding and Brazing Qualifications;
5. Section X, Fiberglass-Reinforced Plastic Pressure Vessels;
6. Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components Division 1;
7. All Case Interpretation and Addenda for each section, except as provided in (g) below.

(c) The National Board Inspection Code—1992 is adopted as a safety standard under this subchapter and shall apply according to the provisions thereof, except that the following section shall not apply:

1. The third paragraph of the purpose and scope.

(d) Each person engaged in the design, construction, fabrication, installation, repair or alteration of unfired pressure vessels 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 become mandatory six months after approval by the ASME Council as do published addenda and Code Cases unless specific exception is taken by the Office of Boiler and Pressure Vessel Compliance administratively subject to confirmation by the Board.

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

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

Incorporation of NBIC updated.

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

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

12:90-5.3 Classification of unfired pressure vessels

(a) Unfired pressure vessels shall be classified as Class I, Class II, Class III, or Class IV unfired pressure vessels.

(b) Specific unfired pressure vessels shall meet or exceed the minimum provisions of its class.

12:90-5.4 Class I unfired pressure vessels

(a) Class I unfired pressure vessels shall conform in all respects to the pertinent sections of the ASME Code that are valid at the time of construction.

(b) All shop inspections of Class I unfired pressure vessels shall be conducted by qualified inspectors who shall satisfy the requirements of the ASME Code and shall be in possession of a valid National Board of Boiler and Pressure Vessel Inspector's Commission.

(c) All Class I unfired pressure vessels shall be stamped and identified as prescribed by the ASME Code.

(d) Class I unfired pressure vessels shall also be stamped and registered with the National Board except as stipulated in N.J.A.C. 12:90-5.13(d).

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).

12:90-5.5 Class II unfired pressure vessels

Unfired pressure vessels designated as Class II unfired pressure vessels shall be existing unfired pressure vessels constructed prior to January 1, 1957 in accordance with the API-ASME joint code for unfired pressure vessels and registered with the State prior to January 1, 1957.

12:90-5.6 Class III unfired pressure vessels

Unfired pressure vessels designated as Class III unfired pressure vessels may in the future be either new or used non-code pressure vessels and will be identified as New Jersey Approved Pressure Vessels meeting the requirements of N.J.A.C. 12:90-5.9.

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

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

Requirements conformed to N.J.A.C. 12:90-5.9.

12:90-5.7 Class III unfired pressure vessels—New Jersey Standard

Pressure vessels identified as New Jersey Standard shall retain their identification through their life period. No additional fabrication of this standard shall be allowed.

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

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

Text repealed and new text added.

12:90-5.8 Class III unfired pressure vessels—New Jersey Special

Pressure vessels identified as New Jersey Special shall retain their identification through their life period. No additional fabrication to this classification shall be allowed.

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

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

Text repealed and new text added.

12:90-5.9 Class III unfired pressure vessels—New Jersey Approved

(a) This section shall apply to a procedure to obtain approval for a non-code vessel as a Class III unfired pressure vessel known as New Jersey Approved.

(b) The application for a New Jersey Approved unfired pressure vessel shall meet the following requirements:

1. To expedite handling of a request for non-code construction review, all materials shall be gathered and submitted, in as complete a form as possible, by the user;

2. When it is necessary to defer filing of some material, such omission shall be prominently noted in the letter of application;

3. All written material shall be in the English language;

4. All letters of application shall be accompanied by payment of \$1,500 for each non-code design. Additional fees shall be required for designs submitted for a single project and shall be repetitive for each user-application of the design;

5. Following final inspection and test, the manufacturer shall complete an appropriate manufacturers' data report form. This form shall be certified by the New Jersey authorized inspector who will identify his New Jersey Certificate of Competency license number; and

6. Reference to conformance to the ASME Code shall be deleted where such appears on the form. The completed form, in duplicate, together with a facsimile of the stamping, shall be filed for registry with the Office of Boiler and Pressure Vessel Compliance.

(c) The New Jersey Approved unfired pressure vessel may require periodic reinspection.

(d) Compliance with (e) through (m) below shall be required to establish ASME Code equivalency.

(e) The maximum allowable working pressure of the New Jersey Approved unfired pressure vessel at a given temperature may be limited to a maximum of 80 percent of that to which the vessel can be subjected in accordance with the ASME Code.

(f) Drawings, fully descriptive of the unfired pressure vessel, with special attention to clarity of weld details and nozzles and other openings, shall be submitted.

(g) Identification of materials within ranges of chemical and physical characteristics shall match with those listed in the appropriate ASME Code section.

(h) Full computations shall be provided, using appropriate formulae as required, by the applicable code section. All computations shall be labeled and ASME Code reference given. Where ASME Code formulae do not apply, the rationale of alternate methods of computation shall be clearly demonstrated. Finite Element Analysis is an acceptable alternative method to demonstrate design rationale.

(i) Evidence of appropriate welding procedures and operator's tests shall be supplied. If such is unavailable from the manufacturer, verification of sound welding shall be made as required by the Office of Boiler and Pressure Vessel Compliance.

(j) All material shall be reviewed by a New Jersey registered professional engineer, who shall verify its equivalency to the basic requirements of the ASME Code.

(k) The user's letter of application shall briefly outline the nature of the substance to be contained by the unfired pressure vessel, proposed pressure and temperature conditions and heating, cooling or pressurizing medium.

(l) All of the foregoing documentation shall be forwarded to the Office of Boiler and Pressure Vessel Compliance by the user of the vessel with a letter requesting that New Jersey Approved classification be assigned, if warranted.

(m) When approved, the unfired pressure vessel shall be stamped New Jersey Approved.

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

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

Text at (b) deleted and requirements for approval of unfired pressure vessels added to (c); recodification.

Amended by R.1991 d.609, effective December 16, 1991.

See: 23 N.J.R. 2948(a), 23 N.J.R. 3815(a).

Revised (b)4.

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

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

12:90-5.10 Class IV unfired pressure vessels

(a) Pressure vessels designated as Class IV unfired pressure vessels shall be user-inspected, where applicable, warranted and expressly approved.

(b) To qualify as such, a user-inspector shall be continuously employed as a full-time inspector by the inspection division of a user maintaining an adequate unfired pressure vessel design and inspection section.

(c) A user-inspector shall be approved by and registered with the Office of Boiler and Pressure Vessel Compliance, which reserves the right to withdraw such approval at its discretion.

(d) The Office of Boiler and Pressure Vessel Compliance shall be furnished, upon request, such copies of design, material specification calculations and allied data as available or needed. The Office of Boiler and Pressure Vessel Compliance shall retain its prerogative of supervision over user-inspection, joint inspection and reinspection as it may deem necessary.

(e) When approved, Class IV unfired pressure vessels shall be constructed and stamped in accordance with the user-inspection provisions of the ASME Code.

12:90-5.11 Design criteria

(a) Machines having internal pressure containing parts incidental to the prime purpose of the machine may be exempt from the ASME Code, if the design criteria of the machine results in the strength of the pressure containment portion exceeding that which would be required if designed in accordance with the ASME Code.

(b) Impervious graphite materials may be used in the fabrication of heat exchangers under the New Jersey Approved classification pending acceptance of this material under the ASME Code.

(c) Manufacturers desiring to fabricate vessels utilizing impervious graphite materials shall be required to substantiate the design of such vessels and the composition of the graphite material under the New Jersey Approved classification.

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

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

"Special" changed to "approved".

12:90-5.12 Welded repairs and alterations to unfired pressure vessels

(a) Welded repairs and alterations to unfired pressure vessels shall comply with:

1. The original construction standard; or
2. The construction standard referenced in N.J.A.C. 12:90-5.2(b) provided that requirement is not less stringent than the original construction standard; and

3. The National Board Inspection Code—1992 edition.

(b) Welded repairs to unfired pressure vessels shall be performed by a contractor possessing a valid and appropriate ASME Code symbol stamp or have National Board repair authorization or New Jersey repair authorization.

(c) A record of welded repairs shall be filed with the Office of Boiler and Pressure Vessel Compliance when requested.

(d) Alterations to unfired pressure vessels shall be performed by the appropriate Code symbol holder and/or National Board Alteration Certificate Holder.

(e) An alteration report and a copy of the original manufacturer's data report shall be filed with the National Board of Boiler and Pressure Vessel Inspectors or the Office of Boiler and Pressure Vessel Compliance if the unfired pressure vessel is not registered with the National Board. The fees for registration shall be in accordance with N.J.A.C. 12:90-5.15(d).

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

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

Incorporation of NBIC updated.

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

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

12:90-5.13 Inspection of unfired pressure vessels

(a) Shop inspection of unfired pressure vessels shall be required, except as provided in (b) below.

(b) Unfired pressure vessels in which steam is not generated, and which do not exceed the following volume and pressure limits, may be exempted from shop inspections by qualified inspectors; provided, that they comply in all other respects with this subchapter:

1. Five cubic feet in volume and 250 psig design pressure;
2. One and one-half cubic feet in volume and 600 psig design pressure.

(c) Such vessels shall be of simple, single wall chamber construction.

(d) Vessels exempted from ASME Code inspection by this section shall be stamped with the "UM" symbol, or as otherwise provided for construction other than Class I pressure vessel.

(e) Shell and tube heat exchangers, jacketed vessels and other type vessels which may be subject to differential pressures shall be shop inspected by an authorized inspector.

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.

12:90-5.14 Fee and visit charge for shop inspection

(a) The fee for a shop inspection shall be the higher of either 1 or 2 below:

1. A fee of \$25.00 for each boiler inspected; or
2. A daily visit charge of \$160.00 for any shop inspection of four hours or less, and \$300.00 for any shop inspection exceeding four hours.

(b) In addition to the inspection fee, the travel expenses of the inspector shall be paid at the time of the inspection.

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

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

Payment for travel expenses of inspector added.

Amended by R.1991 d.609, effective December 16, 1991.

See: 23 N.J.R. 2948(a), 23 N.J.R. 3815(a).

Revised (a)-(c).

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

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

12:90-5.15 Registration of unfired pressure vessels and fees

(a) Unfired pressure vessels shall be registered with the Office of Boiler and Pressure Vessel Compliance.

(b) Unfired pressure vessels registered with the National Board need not be registered with the Office of Boiler and Pressure Vessel Compliance if the owner has been provided with a legible copy of the original National Board registered manufacturers' data report and retains it on file for the life of the unit.

(c) No original registration or registration fee shall be required for vessels inspected by State inspectors, since registration is made by the State inspector.

(d) In instances other than (b) or (c) above, the data reports of the manufacturer, in duplicate, with a registration fee of \$2.00 for each unfired pressure vessel, shall be forwarded to the Office of Boiler and Pressure Vessel Compliance for registration.

1. When registered, one copy of the manufacturer's data report shall be returned to the user of the unfired pressure vessel.

2. If reports are not filed, the unfired pressure vessel shall be subject to State inspection and State inspection fees shall be assessed.

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

SUBCHAPTER 6. REFRIGERATION SYSTEMS

12:90-6.1 Scope of subchapter

(a) This subchapter shall apply to the design, construction, inspection, installation, repair and alteration of refrigeration systems, except as provided in (b) below.

(b) This subchapter shall not apply to:

1. Systems using refrigerants of flammable or toxic nature of three tons or less of refrigerating capacity;
2. Systems using refrigerants of flammable or toxic nature requiring six driving horsepower or less;
3. Systems using refrigerants of nonflammable and nontoxic nature of 18 tons refrigerating capacity or less;
4. Systems using refrigerants of nonflammable and nontoxic nature requiring 36 driving horsepower or less; and
5. Systems using refrigerants of a nontoxic and non-flammable nature of 15 psig or less, regardless of capacity.

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

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

Exclusion added at (b)5.

12:90-6.2 Compliance with referenced standards

(a) Refrigeration systems shall be constructed, installed, maintained, repaired and inspected in accordance with standards referenced in (b) below.

(b) The standards referenced in Article 13, Mechanical Refrigeration of the BOCA Basic National Mechanical Code-1984 are adopted as safety standards under this subchapter and shall apply according to the provisions thereof.

(c) Each person engaged directly with refrigeration systems shall protect the public by complying with the standards prescribed in (b) above.

(d) Only standards relating to public safety (i.e. substantive rules) are adopted by any incorporation by reference as prescribed in (b) above.

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

12:90-6.3 Relief devices

(a) A relief device of proper size shall be installed on the compressor discharge line, located between the compressor outlet port and the discharge shut-off valve. This relief device may discharge into the suction side.

(b) A relief device shall also be installed to relieve from the vapor space of the liquid receiver, condenser, and other pressure vessels in the system.

(c) Relief devices shall discharge to the atmosphere at a safe point and through a diffuser, except as provided in (a) above and (d) below.

(d) Where discharge to the atmosphere is impracticable or hazardous to the immediate neighborhood, the relief device may discharge into a receptacle through which the refrigerant can be disposed of in a safe manner.

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

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

Stylistic change.

12:90-6.4 Inspection of refrigeration systems

(a) Refrigeration systems shall be inspected annually by an authorized State or insurance company inspector.

(b) It shall be the responsibility of the operator and the inspector to carefully check for indications of irregular, faulty or hazardous conditions.

(c) This inspection shall include the liquid receiver, condenser, all safety valves and their discharge points, gauges, controls and all other items which might be considered potentially critical.

(d) The inspector shall check the license of the operator and the State registration certificate and make note of these items in the inspection report.

(e) Damaged, altered, defaced or lost certificates must be replaced by request through the Office of Boiler and Pressure Vessel Compliance. The fee for replacement shall be \$7.50.

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

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

Certificate replacement requirements added at (e).

12:90-6.5 Fee for field inspection

(a) An insurance company making an annual inspection of refrigerating systems shall pay a \$10.00 fee to the State, payable by and collected from the user by the inspector at the time of field inspection for each system.

(b) The owner or user may request field inspection by the State.

(c) The fee for an annual field inspection by the State, based on the refrigeration capacity of the system, shall be paid to the State inspector as follows:

1. Over three and under 25 tons	\$35.00
2. 25 tons and over, but less than 300 tons	50.00
3. 300 tons and over	70.00

(d) In addition to the field inspection fee, the travel expenses of the State inspector shall be paid at the time of inspection.

Administrative Correction to (a) and (c): fee changes.

See: 23 N.J.R. 2512(b).

SUBCHAPTER 7. LICENSING OF OPERATING ENGINEERS AND FIREMEN

12:90-7.1 Scope of subchapter

This subchapter shall apply to the procedures required to obtain a license as an operating engineer or fireman.

12:90-7.2 Application for licenses

(a) The application shall be typewritten or neatly and legibly printed in ink. Only one application may be submitted at a time.

(b) All applications shall be carefully completed and notarized.

(c) The statements of the applicant shall indicate the actual experience as specified in the eligibility provisions of N.J.A.C. 12:90-7.4 through 7.13. Only pertinent, applicable, lawful and full-time experience shall be listed. This experience shall have been completed within seven years of the filing of application.

(d) Incomplete or improper applications shall not be accepted.

(e) An application for a license shall be made on forms provided by the Office of Boiler and Pressure Compliance. Only one classification or change of grade may be requested per application.

(f) The statements on the first or original application shall be endorsed by two engineers each holding a valid blue seal or higher New Jersey license, except as provided in (g) below. These endorsements shall verify the applicant's statement.

(g) Substitution for the signatures of the endorers of (f) above may be the holder of:

1. A marine engineer's license with the holder's experience documented by trip discharges;
2. Another State or city license with the holder's experience documented with a letter from the employer identifying operational experience and equipment;
3. A United States service or Merchant Marine discharge establishing the required engineering experience; or
4. Written statements from two former employers or the present employer signed by responsible endorers and showing required engineering experience.

(h) The endorsements of (f) above shall not be required for low pressure licenses or special licenses.

(i) No license shall be granted to a person less than 18 years of age.

(j) All correspondence relative to licenses or applications shall be addressed to the Office of Boiler and Pressure Vessel Compliance.

(k) The Office of Boiler and Pressure Vessel Compliance shall be notified of any change of residence. When writing, the license number shall be specified.

(l) The fee for examination for an original license shall be \$25.00, and the fee for a raise of grade or additional classification shall be \$20.00.

(m) The fee shall accompany the application.

(n) No annual renewal fee shall be charged for additional classifications on any license.

(o) The fee for application for a license shall be a check or money order made payable to the order of the Commissioner of Labor, Office of Boilers and Pressure Vessels trust account.

(p) No liability shall be assumed by the Office of Boiler and Pressure Compliance for loss in the transmission of the fee.

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

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

Restriction to one application added at (a) and (e).

Administrative Correction to (l): Fee changes.

See: 23 N.J.R. 2512(b).

Amended by R.1991 d.609, effective December 16, 1991.

See: 23 N.J.R. 2948(a), 23 N.J.R. 3815(a).

Revised (o).

12:90-7.3 Classification of licenses for operators

(a) The letters A, B and C shall be used to identify the grade of the license.

(b) "A" or gold seal shall designate a first-grade license; "B" or red seal, a second-grade license; and "C" or blue seal, a third-grade license.

(c) A black seal shall identify a boiler operator.

(d) The license stamped on its face, "in-charge" shall identify a boiler operator in charge.

(e) Boiler operator and firemen classifications shall be identical.

(f) The numbers listed in Table 7.3(f) shall be used to identify the equipment indicated.

Table 7.3(f)

Arabic Number	Equipment
1	steam stationary boiler and steam prime mover
2	refrigeration system
3	nuclear boiler and prime mover
7	hoisting machine and long boom crane
8	steam portable boiler and steam prime mover
9	steam locomotive crane

(g) Licenses for operators shall be classified as follows:

1. Special limited applications;
2. Low pressure boiler;
3. Operator in charge of low pressure boiler;

4. Operator in charge of high pressure boiler;
5. 1A, 1B, or 1C steam stationary boiler and steam prime mover;
6. 2A, 2B, or 2C refrigeration system;
7. 3A, 3B, or 3C nuclear boiler and prime mover;
8. 7C long boom crane;
9. 8A, 8B, or 8C steam portable boiler and steam prime mover; and
10. 9A or 9B steam locomotive crane.

12:90-7.4 Eligibility for boiler operator's license

To be eligible for a boiler operator's license, the applicant shall have had at least three months experience as a helper, apprentice or assistant to a licensed operator of equipment requiring such license.

12:90-7.5 Eligibility for low pressure boiler operator's license

(a) To be eligible for a low pressure boiler operator's examination, the applicant shall:

1. Be able to comply with N.J.A.C. 12:90-7.4, or
2. Have had intensive training for 30 full working days in a program established by the Chief Engineer and approved by the Office of Boiler and Pressure Vessel Compliance, prior to the start of the training period. A log shall be established with the licensed operator doing the training, which shall be one-on-one, and the trainee shall have written verification of such training from the chief engineer.

(b) A licensed fireman may be eligible for examination for an "in-charge" license after three months actual service in the operation of boilers requiring such license.

Amended by R.1990 d.24, effective January 16, 1990.
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).
Training requirements revised at (a)2.

12:90-7.6 Eligibility for high pressure boiler operator's license

(a) To be eligible for a high pressure boiler operator in charge examination, the applicant shall:

1. Be able to comply with N.J.A.C. 12:90-7.4, or
2. Have had intensive training for six weeks in a program established by the Chief Engineer and approved by the Office of Boiler and Pressure Vessel Compliance, prior to the start of the training period. A log shall be established with the licensed operator doing the training, which shall be one-on-one, and the trainee shall have written verification of such training from the chief engineer.

(b) If the applicant has had six months experience as a licensed low pressure fireman, the six week period referenced in (a) above may be reduced to 30 calendar days.

(c) For special license up to 100 horsepower, an applicant with 30 days experience may be eligible.

Amended by R.1990 d.24, effective January 16, 1990.
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).
Training requirements revised at (a)2.

12:90-7.7 Eligibility for third grade steam engineer's license

(a) To be eligible for a third grade steam engineer's (1-C or 8-C) examination, the applicant shall have a fireman in-charge high pressure license and shall have had at least six months subsequent experience in the operation of equipment requiring supervision by a third grade engineer, or as an assistant in the operation of equipment requiring a third grade license for shift operation.

(b) Experience obtained outside the State of New Jersey may be considered if the applicant has served at least two years as a boiler operator of high pressure boilers of over 1,000 horsepower.

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

12:90-7.8 Eligibility for third grade refrigeration engineer's license

(a) To be eligible for a third grade refrigeration engineer's (2-C) examination, the applicant shall have had at least:

1. Six months experience as an assistant to an operator of a flammable or toxic refrigeration system; or
2. Three months experience as an operator of a flammable or toxic refrigeration system; or
3. Three months experience as an assistant to the operator of a flammable or toxic refrigeration system, provided the applicant has been given intensive training for the period by the licensed operator, and the chief engineer verifies such training and experience by letter; or
4. Six months experience as an operator of a nontoxic refrigeration unit of at least 250 tons capacity and three months experience as an assistant to the licensed operator of flammable or toxic refrigeration system; or
5. Six months experience as an operator of a nontoxic refrigeration unit of at least 250 tons capacity and satisfactory proof of completion of sufficient education in the operation of a flammable or toxic refrigeration system in an educational program approved by the Division of Vocational Education of the New Jersey Department of Education.

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

12:90-7.9 Eligibility for nuclear engineer's license

To be eligible for nuclear engineer's (3-C) examination, the applicant shall hold certification from the United States Nuclear Regulatory Commission qualifying him to operate nuclear power equipment.

12:90-7.10 Eligibility for long boom crane operator's license

(a) To be eligible for a hoisting machine long boom crane operator's (7-C) examination, the applicant shall have had at least six months experience as an operator of cranes.

(b) At least three months of the experience of (a) above shall be documented as being cranes with boom length of over 99 feet.

Amended by R.1990 d.24, effective January 16, 1990.
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).
Specification of crane length added at (b).

12:90-7.11 Eligibility for second grade engineer's license

To be eligible for a second grade engineer's examination, the applicant shall have a third grade license and shall have had at least one year's subsequent practical experience in the operation of equipment requiring supervision by a second grade or first grade engineer.

12:90-7.12 Eligibility for first grade engineer's license

(a) To be eligible for a first grade engineer's examination in any classification, the applicant shall have:

1. A second grade license and subsequently served one year as chief engineer in a plant requiring supervision by a second grade engineer; or
2. A second grade license with two years subsequent practical experience as an operating engineer in a plant requiring supervision by a first grade engineer; or
3. Experience of an equivalent amount for grade or classification from some other jurisdiction.

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.

12:90-7.13 Other eligibility considerations

(a) An applicant for original license, change of classification or raise of grade may show in writing, as a substitute for a minor portion of the experience listed in N.J.A.C. 12:90-7.4 through 7.12, non-operating experience, such as servicing, maintenance, repair or installation of equipment; or satisfactory proof of completion of sufficient formal education or academic study embracing such equipment.

(b) When an applicant's operating engineer experience and training warrants, the Office of Boiler and Pressure Vessel Compliance may determine the classification and grade of license most suitable.

(c) The Office of Boiler and Pressure Vessel Compliance may consider an applicant's experience of an equivalent amount for grade or classification from some other jurisdiction.

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

12:90-7.14 Examinations

(a) Examinations shall be held on the first Wednesday of each month at Trenton, and at various other times and places throughout the State when warranted, and shall be conducted by an examiner.

(b) Applicants shall be notified when and where to appear for the examination.

(c) Failure to appear for the examination shall be considered sufficient cause to void the application, unless a satisfactory explanation is given for failing to appear.

(d) Failure to appear for the examination or to obtain a passing grade shall not entitle the applicant to a refund of any fee.

(e) Examinations for an engineer's license shall be conducted in a written form and shall consist of as many questions and be of such nature as the office of Boiler and Pressure Vessel Compliance shall consider appropriate for the license desired.

(f) Examinations for a fireman's license shall consist of such questions as the Office of Boiler and Pressure Vessel Compliance shall consider proper and shall pertain to the safe operation of steam and hot water boilers, appliances, auxiliaries and such other equipment covered by the licensing act.

(g) An applicant for up to and including a C grade license may, upon prior request, be examined through a reader or interpreter accompanying the applicant provided the reader or interpreter is acceptable to the Office of Boiler and Pressure Vessel Compliance.

(h) Questions used in the examination shall not be copied by any applicant or retained by the applicant after examination, or taken from the presence of the authorized agent of the Office of Boiler and Pressure Vessel Compliance during the examination. Violation of this subsection shall be sufficient cause to disqualify the applicant.

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.

12:90-7.15 Granting of license

(a) A license shall be granted and designated Grade A when an average of 80 percent or more is attained on a Grade A examination.

(b) A license shall be granted and designated Grade B when an average of 70 percent or more is attained on a Grade B examination.

(c) A license shall be granted and designated Grade C when an average of 60 percent or more is attained on a Grade C examination.

(d) No license shall be granted on an average of less than 60 percent.

(e) A license issued after examination covering one or more classifications shall be valid in any plant where the class of engineering is within the scope of the license issued.

(f) Licenses merely bearing the impression of the seal of the Department of Labor shall be issued as special licenses and are limited to the operation of equipment specified on the face thereof. Special licenses may be issued to operators of nonconventional boilers, such as, but not limited to, electric, coil, or waste heat or conventional high pressure boilers of over six to 100 horsepower. These licenses may be transferred to similar equipment when approved following written request by the applicant or employer.

(g) Duplicate licenses for part-time employment may be issued at the discretion of the Commissioner.

1. The fee for a duplicate license is \$3.00 for one year.

2. A request by the licensee for a duplicate license shall be accompanied by a letter from the company desiring to employ the licensee.

3. The duplicate license shall specify the plant where it is to be used and may be transferred when approved following written request.

4. A Chief Engineer may not request a duplicate part-time license for secondary location employment.

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

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

Restrictions on Chief Engineer added at (g)4.

12:90-7.16 Re-examination

(a) The applicant may not be re-examined for a period of at least three months, but may be allowed one re-examination without additional charge, within six months of the original examination. If again unsuccessful, the applicant may request an additional examination, provided that the request is accompanied by a fee of \$10.00.

(b) Upon failing the examination for the third time, an applicant who wishes to retake the examination shall wait three months prior to reapplication, at which time a new application form shall be fully completed.

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

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

Reapplication requirements added at (b).

Administrative Correction to (a): Fee changes.

See: 23 N.J.R. 2512(b).

12:90-7.17 Posting of license

(a) All licenses shall be framed and properly posted adjacent to the equipment involved, in the engineer's office or in the plant office, whichever is suitable.

(b) The license shall be available for examination.

(c) A penalty may be imposed for violation of this section.

12:90-7.18 Suspension or revocation of license

(a) Any license may be suspended or revoked for incompetence, negligence, intoxication, or drug abuse while on duty, or for any other valid reason establishing that the licensee is unfit to hold a license.

(b) Any license or identification card shall be surrendered and immediately revoked if, for any purpose, it is loaned, abandoned or allowed to pass from the personal control of the owner.

(c) All licenses shall expire unless renewed on or before the anniversary month of the original license. Changing of grade or addition of classification shall not change this anniversary date.

(d) A license shall be automatically cancelled on the date of its expiration. Any persons performing the duties of a licensee and holding an expired license shall be subject to the penalty provisions under N.J.S.A. 34:7-6, as is his supervisor and employer.

(e) Any person using fraudulent means to obtain a license shall be subject to prosecution. Any license acquired through such means shall be invalid.

(f) A licensee whose license is suspended or revoked has the right to request a hearing conducted in accordance with N.J.S.A. 34:7-3.

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

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

12:90-7.19 Renewal of license

(a) When applying for the renewal of a license it shall be necessary to return only the signed identification card with a fee of \$10.00 for a one year renewal or \$20.00 for a three year renewal.

(b) A license may be renewed within 60 days prior to the date of its expiration.

(c) An application for a renewal of an expired license shall be approved provided:

1. A fee of \$15.00 is enclosed for one year or \$30.00 for a three year renewal;
2. The application is made within three years of the expiration date of the expired license; and
3. All penalties lawfully imposed on the applicant under N.J.S.A. 34:7-6 have been paid.

(d) Application for renewal of a license expired more than three years shall be treated as an original application. All records of the previous license may be destroyed.

(e) An altered, defaced or otherwise mutilated license shall be replaced only after review by the Office of Boiler and Pressure Vessel Compliance. Photostats, photographs or reproduction of a license shall have no status and shall not be recognized. A fee of \$5.00 shall be submitted for a replacement license.

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

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

Fee requirement for replacement added at (e).

Administrative Correction to (a) and (c)1: Fee changes.

See: 23 N.J.R. 2312(b).

12:90-7.20 Employment of unlicensed person in emergency

(a) Employers shall immediately request permission from the Office of Boiler and Pressure Vessel Compliance, in writing, if for any reason of emergency it becomes necessary to employ an unlicensed person temporarily for a period not to exceed 15 days explaining fully the circumstances.

(b) The Commissioner may extend the time period under (a) above provided that a written extension request is received by the Office of Boiler and Pressure Vessel Compliance prior to the expiration of the 15 day period in (a) above. Such request shall contain:

1. The reason for the emergency condition;
2. A date certain when a licensed person will be employed;
3. The method used and efforts made in searching for a licensed person;
4. The name of the unlicensed person currently employed and if the unlicensed person has made an application for examination with the Office of Boiler and Pressure Vessel Compliance; and
5. Such other information as the Commissioner shall direct.

(c) Late requests for extension are subject to penalties which must be satisfied prior to permission being granted.

(d) If an unlicensed person in (b)4 above who has filed an application with the Office of Boiler and Pressure Vessel Compliance fails to appear for an examination as notified or a licensed person is not hired within the extension period set by the Commissioner, the Commissioner may at his or her discretion refer a licensed person from an employment agency or other appropriate source to the employer.

(e) The Office of Boiler and Pressure Vessel Compliance shall again be notified when a licensed person is employed, giving the name, address, and license classification, grade and number of such employee.

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 requests to employ unlicensed persons added 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).

SUBCHAPTER 8. STANDARDS AND PUBLICATIONS REFERRED TO IN THIS CHAPTER

12:90-8.1 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—current edition 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 Cases, Interpretations and Addenda

2. BOCA—1987, Basic National Mechanical Code.
3. NBBPVI—1992, National Board Inspection Code.
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.

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).

12:90-8.2 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 Workplace Standards between the hours of 9:00 A.M. and 4:00 P.M. on normal working days:

New Jersey Department of Labor
Division of Workplace Standards
36 West State Street
Trenton, New Jersey

12:90-8.3 Availability of documents from issuing organization

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 meaning, and are the organizations issuing the standards and publications listed in N.J.A.C. 12:90-8.1.

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:
Office of Boiler and Pressure Vessel Compliance
New Jersey Department of Labor
CN 392
Trenton, New Jersey 08625-0392

New Jersey Uniform Construction Code—Bureau of Technical
Services
New Jersey Department of Community Affairs
Division of Housing and Development
CN 816
Trenton, New Jersey 08625-0816