

CHAPTER 90

**BOILERS, PRESSURE VESSELS
AND REFRIGERATION**

Authority

N.J.S.A. 34:1-20, 34:1-47, 34:1A-3, 34:7-18;
and Reorganization Plan 002-2002

Source and Effective Date

R.2005 d.80, effective January 27, 2005.
See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

Chapter Expiration Date

Chapter 90, Boilers, Pressure Vessels and Refrigeration,
expires on January 27, 2010.

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 Chapter 90, Boilers, Pressure Vessels and Refrigeration, was repealed and new rules became effective December 17, 1984.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: 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 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.

“API” means the American Petroleum Institute.

“API-ASME Code” means the American Petroleum Institute-American Society of Mechanical Engineers Code for Unfired Pressure Vessels for Petroleum Liquids and Gases that existed from 1934 through 1956, and is applicable to Class II unfired pressure vessels described in N.J.A.C. 12:90-5.5.

“API certified inspector” means an inspector who is certified by API to perform functions specified in API-510.

“API-510” means the pressure vessel inspection code for maintenance, inspection, repair, alteration, and rerating procedures for pressure vessels used by the petroleum and chemical process industries.

“Approved” means acceptable to the Commissioner of Labor and Workforce Development.

“ASHRAE” means the American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

“ASHRAE 15” means the Safety Code for Mechanical Refrigeration published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

“ASHRAE 34” means the standard on Designation and Safety Classification of Refrigerants published by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

“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;
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; or
3. An owner or user of pressure vessels who maintains an established inspection department, whose organization and inspection procedures comply with the requirements of the National Board or the American Petroleum Institute, as applicable, and which is registered with the Bureau of Boiler and Pressure Vessel Compliance (BBPVC).

“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 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.

7. “Hot water supply boiler” means a low pressure hot water boiler having a volume exceeding 120 gallons or a heat input exceeding 200,000 BTU/Hour (58.6 KW) or an operating temperature exceeding 200 degrees Fahrenheit, that provides hot water to be used externally to itself.

8. “Unfired boiler” means an unfired pressure vessel in which steam is generated except for evaporators, heat exchangers or vessels in which steam is generated by the use of heat resulting from operation of a processing system containing a number of pressure vessels such as used in the manufacture of chemical and petroleum products.

“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 10 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.

“Bureau of Boiler and Pressure Vessel Compliance” means the Bureau of Boiler and Pressure Vessel Compliance of the Division of Public Safety and Occupational Safety and Health, New Jersey Department of Labor and Workforce Development.

“Certificate of Competency” means a certificate issued to a person who has passed the inspection examination prescribed by the Examining 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 who, to establish responsibility, supervises or takes the lead over one or more of the licensed operators of high pressure boilers, power plants or refrigeration systems working in the same plant.

“Commissioner” means the Commissioner of Labor and Workforce Development or his or her 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 Public Safety and Occupational Safety and Health” means the Division of Public Safety and Occupational Safety and Health of the New Jersey Department of Labor and Workforce Development.

“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.

“Field inspection of unfired pressure vessels” means external or internal pressure vessel inspections as required by the National Board Inspection Code or API-510, other than for new construction, repair or alteration.

“Fireman” means a boiler operator.

“Flammable” when used to describe a refrigerant means one that is classified as A2, B2, A3, or B3 according to ASHRAE 34. For refrigerant blends assigned dual classifications for their “as formulated” and conditions, the “worst case of fractionation” classification shall apply.

“Highly toxic” means a chemical that produces a lethal dose or lethal concentration that falls within any of the following categories:

1. A chemical that has a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each; or

2. A chemical that has a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each; or

3. A chemical that has a median lethal concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor, or two milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each. (Mixtures of these materials with ordinary materials, such as water, might not warrant classification as highly toxic. While this system is basically simple in application, any hazard evaluation which is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.)

“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 Bureau of Boiler and Pressure Vessel Compliance.

“Model steam boiler” means a boiler that is individually fabricated for non-commercial use, and is used primarily for demonstration, exhibition or education purposes, including antique boilers or steam pumps.

“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.

“National Board Inspection Code” means the manual for boiler and pressure vessel inspectors published by the National Board of Boiler and Pressure Vessel Inspectors.

“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.

“Occurrence” means any event which reduces the pressure-containing capability of, or requires immediate repair to, a boiler or pressure vessel, exclusive of normal wear on the equipment.

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

“Owner-user inspector” means an inspector who possesses an owner-user Certificate of Competency issued by the Bureau of Boiler and Pressure Vessel Compliance and is employed by a registered owner-user inspection agency.

“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 plant” means a system or plant that is a combination of interconnected refrigerant containing parts constituting 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 audits and joint reviews as required and assigned by the

ASME, API, and National Board including owner-user certification audits.

“State inspector” means an employee of the Bureau 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.

“Toxic” means a chemical that produces a lethal dose or lethal concentration that falls within any of the following categories:

1. A chemical that has a median lethal dose (LD50) of more than 50 milligrams per kilogram, but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each;
2. A chemical that has a median lethal dose (LD50) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each; or
3. A chemical that has a median lethal concentration (LC50) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

“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.

“Welded repair” means work necessary to restore a boiler or pressure vessel to a condition suitable for safe operation at the design conditions. If any repair changes the design temperature or pressure, the requirements for rerating shall be satisfied. A repair can be the addition or replacement of pressure or non-pressure parts that do not change the rating of the boiler or pressure vessel.

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).

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

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

Added definitions for “alteration”, “API”, “API certified inspector”, “API-510”, “hot water supply boiler”, “unfired boiler”, “National Board Inspection Code”, and “owner-user inspector”; deleted definition for “water heater”; and “API-ASME”, “authorized inspection agen-

cy", "boiler", "boiler horsepower", "BTU", "certificate of competency", "Division of Workplace Standards", "shop inspection", and "welded repair" revised.

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).

Inserted "ASHRAE", "ASHRAE 15", "ASHRAE 34", "Field inspection of unfired pressure vessels", "Flammable", "Highly toxic", "Model steam boiler", "Occurrence" and "Toxic".

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

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

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, including, without limitation, model steam boilers.

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).

Added a reference to model steam boilers.

12:90-3.2 Right of entry

(a) For the purpose of examination or inspection of any boiler, pressure vessel, refrigeration plants, 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 (a) above 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).

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

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

12:90-3.3 Equipment requiring a licensed operator

(a) Any person operating the equipment listed below shall have 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, and only when the building or building being served is deemed occupied;

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

4. Any refrigerating plant using a refrigerant which is flammable, highly toxic 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).

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)4, inserted a reference to highly toxic refrigerants.

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**

horsepower <u>over</u>	Boiler horsepower <u>not over</u>	Chief Engineer's License(1) 1-A gold seal 1st grade engineer	Shift Engineer's License 1-C blue seal 3rd grade engineer
	3,000		
1,000	3,000	1-B red seal 2nd grade engineer	1-C blue seal 3rd grade engineer
500	1,000	1-C blue seal 3rd grade 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(f), (g), (h) and (i).

(2) Applies only to fully automatic boilers over six but not over 100 boiler horsepower.

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).

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

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

In (c), deleted reference to coil and waste heat boilers.

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.

Amended by R.2005 d.80, effective February 22, 2005.
See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

12:90-4.10 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 \$100.00 for each boiler inspected; or
2. A daily visit charge of \$320.00 for any shop inspection of four hours or less and \$600.00 for any shop inspection exceeding four hours.

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).
Amended by R.2004 d.195, effective May 17, 2004.
See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

In (a)1, substituted "\$50.00" for "\$25.00"; deleted (b).
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 (a)1; and in (a)2, substituted "\$320.00" for "\$160.00" and "\$600.00" for "\$300.00".

12:90-4.13 Fee for field inspection

(a) An insurance company making an annual field inspection shall pay a fee of \$40.00 for each boiler inspected. The insurance company shall pay the fee to the Commissioner of Labor and Workforce Development within 30 days of performing the inspection.

(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 Commissioner of Labor and Workforce Development as follows:

- | | |
|---|----------|
| 1. Ten and not over 60 square feet | \$80.00 |
| 2. Sixty and not over 1,000 square feet | \$110.00 |
| 3. 1,000 square feet and over | \$150.00 |

(d) In addition to the annual internal-external inspection, there may be an external inspection for which the owner or user shall pay to the Commissioner of Labor and Workforce Development a fee of \$100.00.

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).
Amended by R.2004 d.195, effective May 17, 2004.
See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

Rewrote the section.
Amended by R.2005 d.80, effective February 22, 2005.
See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).
Amended by R.2006 d.191, effective May 15, 2006.
See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).

Substituted "\$40.00" for "\$20.00" in the first sentence of (a); substituted "\$80.00" for "\$40.00" in (c)1; in (c)2, substituted "Sixty" for "60" and "\$110.00" for "\$55.00"; substituted "\$150.00" for "\$75.00" in (c)3; and substituted "\$100.00" for "\$50.00" in (d).

12:90-4.14 Registration of boilers

(a) Boilers shall be registered with the Bureau 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 Bureau of Boiler and Pressure Vessel Compliance for replacement. The fee for replacement shall be \$16.00.

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).
Amended by R.2006 d.191, effective May 15, 2006.
See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).

Substituted "\$16.00" for "\$8.00" in the last sentence of (d).

12:90-4.15 (Reserved)

New Rule, R.1996 d.588, effective December 16, 1996.
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).
Repealed by R.1999 d.304, effective September 7, 1999.
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).
Section was "Qualification of inspectors".

12:90-4.16 (Reserved)

New Rule, R.1996 d.588, effective December 16, 1996.
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).
Repealed by R.1999 d.304, effective September 7, 1999.
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).
Section was "Renewal of Certificate of Competencies".

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.
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 (b)3, added a proviso at the end.

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

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

Substituted "\$3,000" for "\$1,500" in (b)4.

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 Bureau of Boiler and Pressure Vessel Compliance, which reserves the right to withdraw such approval at its discretion.

(d) The Bureau 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 Bureau 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—1995 edition and all subsequent editions and addenda, or API-510—1995 edition and all subsequent editions and addenda, as applicable.

(b) Welded repairs to unfired pressure vessels shall be performed by an entity possessing a National Board repair authorization, or a New Jersey repair authorization.

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

(d) Alterations to unfired pressure vessels shall be performed by a National Board Alteration Certificate Holder, or by a New Jersey authorized repair entity when that entity is also an owner-user entity (registered owner-user inspection agency) as defined in API-510.

(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 Bureau 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). If the alteration is performed in accordance with API-510, filing under this subsection is not required; however, the owner-user shall maintain the alteration report for the life of the vessel.

(f) All plans for welded repairs and alterations to pressure vessels shall be approved prior to the start of work by a National Board-commissioned inspector with a valid New Jersey Certificate of Competency who is employed by an authorized inspection agency or the State of New Jersey. Approval may also be given by an owner-user inspector holding a valid New Jersey Certificate of Competency and a National Board owner-user commission or an API certification, subject to the limitation stated in N.J.A.C. 12:90-3.12(d)4.

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).

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)3, updated Code edition; in (b) deleted reference to ASME Code symbol stamp requirements; in (d), added reference to owner-user entities; in (e), added API-510 alteration filing exception; 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).

In (f), added "subject to the limitation stated in N.J.A.C. 5:11-3.12(d) 4" at the end.

12:90-5.13 Shop 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.

Amended by R.1996 d.588, effective December 16, 1996.
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

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).

Deleted a former (f).

12:90-5.14 Field inspection of unfired pressure vessels

(a) Pressure vessels and unfired boilers that are under the supervision of a registered owner-user inspection agency shall be inspected at intervals required by the National Board Inspection Code or API-510, as applicable.

1. Each owner-user inspection organization shall:
 - i. Retain on file at the location where equipment is inspected a true record or copy of the report of each inspection which identifies the National Board Commission number or the API-certification number of the inspector who made the inspection; and
 - ii. Maintain inspection records which will include a list of pressure vessels covered by N.J.S.A. 34:7-14, showing the National Board Commission number or the API-certification number of the inspector who made the inspection and such abbreviated description as may be necessary for identification, date of the last inspection of each unit, and the approximate date for the next inspection. Such inspection records shall be readily available for examination by the Office of Boiler and

Pressure Vessel Compliance or authorized representative during business hours.

New Rule, R.1996 d.588, effective December 16, 1996.
See: 28 N.J.R. 4060(a), 28 N.J.R. 5224(a).

Former N.J.A.C. 5:11-5.14, "Fee and visit charge for shop inspection", recodified to 5:11-5.15.

12:90-5.15 Fee and visit charge for shop inspection

(a) The fee for shop inspection shall be either:

1. A daily visit charge of \$320.00 for any shop inspection of four hours or less which is made for the purpose of monitoring the quality control process during fabrication of a pressure vessel. This daily visit charge shall be \$600.00 if the shop inspection exceeds four hours. Audits and joint reviews will be charged by the day/half day rate; or

2. A fee of \$100.00 for each pressure vessel when the purpose of the visit is to inspect specific vessels.

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).

Recodified from N.J.A.C. 5:11-5.14 and amended by R.1996 d.588, effective December 16, 1996.

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

Former N.J.A.C. 5:11-5.15, "Registration of unfired pressure vessels and fees", recodified to 5:11-5.16.

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

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

In (a)2, substituted "\$50.00" for "\$25.00"; deleted (b).

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

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

In (a)1, substituted "\$320.00" for "\$160.00" in the first sentence and "\$600.00" for "\$300.00" in the second sentence; and substituted "\$100.00" for "\$50.00" in (a)2.

12:90-5.16 Registration of unfired pressure vessels and fees

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

(b) Unfired pressure vessels registered with the National Board need not be registered with the Bureau 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 \$4.00 for each unfired pressure vessel, shall be forwarded to

the Bureau 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.
See: 21 N.J.R. 3247(a), 22 N.J.R. 235(a).
Recodified from N.J.A.C. 5:11-5.15 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.2006 d.191, effective May 15, 2006.
See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).
Substituted "\$4.00" for "\$2.00" in the introductory paragraph of (d).

12:90-5.17 Qualification of inspectors

All inspectors as listed in this subchapter shall obtain a Certificate of Competency as outlined in N.J.A.C. 12:90-3.12(a) through (d) as applicable.

New Rule, 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.

12:90-5.18 Registration of owner-user inspection agencies

(a) All owner-user agencies wishing to conduct field inspection of unfired pressure vessels, pressure relief valve inspection and repair, or welded repairs or alterations shall be registered with the Bureau of Boiler and Pressure Vessel Compliance.

(b) Entities wishing to register as owner-user inspection agencies shall file a Letter of Intent of Certification with the Bureau of Boiler and Pressure Vessel Compliance. This letter shall include a plan and schedule for certification.

(c) Entities who have filed a Letter of Intent of Certification may continue their existing pressure vessel and/or pressure relief valve inspection programs as long as they are actively and in good faith pursuing certification by the Bureau of Boiler and Pressure Vessel Compliance as an owner-user inspection agency.

(d) Owner-user inspection agencies may request registration to conduct field inspection of unfired pressure vessels, inspection and repair of pressure relief valves, or welded repairs and alterations individually or in any combination of these functions.

(e) All owner-user inspection agencies seeking registration with the Bureau of Boiler and Pressure Vessel Compliance shall be audited by the Bureau of Boiler and Pressure Vessel Compliance. Upon successful completion of this initial audit, the owner-user inspection agency shall be registered with the

Bureau of Boiler Pressure Vessel Compliance and shall be audited triennially thereafter. This triennial audit may be conducted on an annual basis when a triennial audit evidences deficiencies. The fee for each audit shall be as provided in N.J.A.C. 12:90-5.15(a)2.

(f) The initial and triennial audits conducted under (e) above shall encompass only those functions appropriate for registration to conduct field inspection of unfired pressure vessels, inspection and repair of pressure relief valves, or welded repairs and alteration, for those owner-user inspection agencies who do not wish to register under all three functions.

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

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, highly toxic or toxic nature of three tons or less of refrigerating capacity;
2. Systems using refrigerants of flammable, highly toxic 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 nonflammable 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.

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

In (b), inserted references to highly toxic refrigerants in 1 and 2.

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) ASHRAE 15 is adopted as the safety standard under this subchapter and shall apply according to the provisions thereof. ASHRAE 34 is adopted for refrigerant safety classifications.

(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.

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

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

Rewrote (b).

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 Bureau of Boiler and Pressure Vessel Compliance. The fee for replacement shall be \$15.00.

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).

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

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

Substituted "\$15.00" for "\$7.50" in the last sentence of (e).

12:90-6.5 Fee for field inspection

(a) An insurance company making an annual inspection of refrigeration systems shall pay a \$40.00 fee to the Commissioner of Labor and Workforce Development 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 made payable to the Commissioner of Labor and Workforce Development as follows:

1. Over three and under 25 tons	\$100.00
2. Twenty-five tons and over, but less than 300 tons	\$150.00
3. 300 tons and over	\$200.00

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

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

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

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

Rewrote the section.

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

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

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

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

Substituted "\$40.00" for "\$20.00" in (a); substituted "Commissioner" for "Commission" in the introductory paragraph of (c); substituted "\$100.00" for "\$50.00" in (c)1; in (c)2 substituted "Twenty-five" for "25" and "\$150.00" for "\$75.00"; and substituted "\$200.00" for "\$100.00" in (c)3.

SUBCHAPTER 7. PRESSURE RELIEF VALVES

12:90-7.1 Scope of subchapter

This subchapter shall apply to entities wishing to disassemble, inspect or repair pressure relief valves for use on boilers, pressure vessels or refrigeration equipment.

12:90-7.2 Requirements for certification

In order to disassemble, inspect or repair pressure relief valves in the State, or for use in the State, the entity performing the function shall either have a National Board Certificate of Authorization for use of the Valve Repair ("VR") stamp or be a New Jersey registered owner-user inspection agency as set forth in N.J.A.C. 12:90-5.18.

SUBCHAPTER 8. LICENSING OF OPERATING ENGINEERS AND BOILER OPERATORS

12:90-8.1 Scope of subchapter

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

12:90-8.2 Application for licenses

(a) The application shall be typewritten or neatly and legibly printed in ink.

(b) All applications shall be carefully completed, signed by the applicant and notarized.

(c) The statements of the applicant shall indicate the actual experience as specified in the eligibility provisions of N.J.A.C. 12:90-8.4 through 8.13. Only pertinent, applicable, and full-time experience shall be listed. This experience shall have been completed within seven years of the filing of application.

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

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

(f) An operating engineer with the appropriate classification who worked with the applicant shall endorse the statements on all applications. For those facilities not requiring operation by a third grade engineer or higher classification, endorsement is acceptable from senior management who are directly responsible for the safe operation of the equipment listed on the application, except as provided in (g) below. Endorsement by the engineer or senior management shall attest to the applicant's statement of experience.

(g) Substitution for the endorsement 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 one or more former or present employer signed by management responsible for the equipment located at its facility. The statement should provide information that is detailed and specific for determining eligibility. At a minimum, it shall contain years of experience of the applicant and describe the type

of equipment operated, including manufacturer, capacity, heat input rating and safety valve setting(s).

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

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

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

(k) The fee for each examination and for any license issued by the bureau shall be \$100.00, and the fee for a raise of grade or additional classification shall be \$80.00. The fee shall be in the form of a check or money order made payable to the Commissioner of Labor and Workforce Development and shall accompany the application.

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

(m) No liability shall be assumed by the Bureau 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).
Amended by R.1997 d.537, effective January 5, 1998.
See: 29 N.J.R. 3416(a), 30 N.J.R. 73(a).

Rewrote (f); deleted former (h); in (k), added a second sentence; and deleted former (m) and (o).
Amended by R.1999 d.304, effective September 7, 1999.
See: 31 N.J.R. 1556(a), 31 N.J.R. 2604(b).

In (c), changed N.J.A.C. reference; rewrote (f); and in (g), added 4.
Amended by R.2004 d.195, effective May 17, 2004.
See: 36 N.J.R. 147(a), 36 N.J.R. 2421(b).

Rewrote (k).
Amended by R.2005 d.80, effective February 22, 2005.
See: 36 N.J.R. 5083(a), 37 N.J.R. 614(b).

Amended by R.2006 d.191, effective May 15, 2006.
See: 38 N.J.R. 912(a), 38 N.J.R. 2163(a).

In the first sentence of (k), substituted "\$100.00" for "\$50.00" and "\$80.00" for "\$40.00".

12:90-8.3 Classification of licenses for operators

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

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

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

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

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

Table 7.3(e)

Arabic Number	Equipment
1	steam stationary boiler and steam prime mover
2	refrigeration plants
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

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

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

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

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

In (a), added a second sentence; deleted former (b); and rewrote (g).

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 "engineer's" following "identify the".

12:90-8.4 Eligibility for boiler operator's license (black seal)

To be eligible for a boiler operator's black seal 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. The Bureau of Boiler and Pressure Vessel Compliance may request a copy of the boiler operator's log for the examiner's review during approval of the application.

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

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

Added a second sentence.

12:90-8.5 Eligibility for low pressure boiler operator's license (black seal)

(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. 12:90-8.4; or
2. Have had intensive training for 30 full working days in a program established by the responsible management representative and approved by the Bureau of Boiler and Pressure Vessel Compliance within five days of starting 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 management representative responsible for the daily operation of the boiler plant. Any training commenced prior to the approval by the Bureau of Boiler and Pressure Vessel Compliance, with the exception of that encompassed within the five day approval period, shall not be credited toward the 30 days intensive training program.

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.

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

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

Rewrote (a)2; 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).

In (a)1, changed N.J.A.C. reference.

12:90-8.6 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. 12:90-8.4; or
2. Have had intensive training for six weeks in a program established by the Chief Engineer and approved by the Bureau of Boiler and Pressure Vessel Compliance, within five days of starting 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. Any training commenced prior to the approval by the Bureau of Boiler and Pressure Vessel Compliance, with the exception of that encompassed within the five day approval period, shall not be credited toward the six week intensive training program.

(b) If the applicant has had six months experience as a licensed low pressure boiler operator, the three months required in N.J.A.C. 12:90-7.4 may be reduced to 30 days.

(c) To be eligible for a special license up to 100 horsepower, an applicant requires 30 days experience with such equipment.

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.