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Note: Changes to the Rules and Regulations shall be made in accordance with the Administrative Procedures Act. (Chapter 101 Delaware Annotated Code)

Administrative Procedures
Statutory Authority: 29 Del. C. § 8210

1.0 Definitions

"The Act": 29 Del C. §8210.

Accident: An unexpected event resulting from (a) unknown causes, (b) carelessness, (c) unawareness, causing injury, death or property damage.

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Alteration: Any change in the item described on the original Manufacturers' Data Report which affects the pressure containing capability of the pressure retaining item. Non-physical changes such as an increase in the maximum allowable working pressure (internal or external) or design temperature of a pressure retaining item shall be considered an alteration. A reduction in minimum temperature such that additional mechanical tests are required shall also be considered an alteration.

ASME: American Society of Mechanical Engineers.

ANSI: American National Standards Institute.

AIA: Authorized Inspection Agency as defined in NBIC.

AI: Authorized Inspector includes the Director, a Deputy Inspector or Special Inspector holding a current National Board Commission, with an "A" or "B" endorsement, and a Delaware Certificate of Competency.

Antique Boiler: Boilers manufactured prior to January 1, 1924, and used solely for display and demonstration purposes.

APA: Administrative Procedures Act.

Automatically Fired Boiler: A boiler that cycles automatically in response to a control system with no operator.

Boiler: A closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum for use externally to itself by the direct application of heat from the combustion of fuels, or from electricity or nuclear energy. The term "boiler" shall include fired units for heating or vaporizing liquids other than water, where these units are separate from processing systems, and are complete within themselves.

- Power boiler: A vessel in which steam or other vapor is generated at a pressure of more than fifteen (15) PSIG.
- High temperature water boiler: A water boiler operating at a pressure exceeding 160 psi and/or temperatures in excess of 250 degrees F.
- Heating boiler A steam boiler operating at pressures not exceeding fifteen (15) psi, or a hot water boiler operating at pressures not exceeding 160 psi and/or temperatures not exceeding 250 degrees F, which is supplied to an external heating system.
- Hot Water Supply Boiler: A vessel used to heat water for purposes other than space heating, where the water is used external to itself, at pressures not exceeding 160 psi, and/or temperatures not exceeding 250 degrees F. at or near the boiler outlet. ASME Stamping would be ASME Section IV, H.
- Pool Heater: An appliance designed for heating non-potable water stored at atmospheric pressure such as water in swimming pools, spas, hot tubs, and similar applications.
- Water Heater: A closed vessel in which water is heated by gas, oil, electric, or some other fuel supply, and the water is used externally to itself for potable water supply, or used for potable water and space heating (as outlined in Section 14 of these Rules and Regulations),

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operating at pressures not exceeding 160 psi and water temperatures not in excess of 210 degrees F. ASME Stamping would be ASME Section IV, HLW.

Certificate of Competency: A certificate issued by the Division to an inspector after passing the Delaware test for inservice inspections, and to an inspector holding a valid National Board Commission for "Shop" inspections only. See Delaware Commission.

Certificate of Inspection: A printed document, issued by the Division of Boiler Safety, signifying the object has met Code requirements after receipt of a report from a National Board Commissioned or Owner/User Inspector, stating the conditions of the object are satisfactory to issue a certificate. The inspector will issue a current decal bearing a date of inspection. The certificate becomes valid upon payment of the required inspection and/or certificate fees.

Commission:

- National Board Commission - a certificate issued by the National Board to an individual.
- Delaware Commission - a Certificate of Competency issued by the Division of Boiler Safety to a National Board Commissioned Inspector employed by the State of Delaware, by an insurance company licensed to sell boiler and machinery insurance in the State of Delaware, or a recognized Delaware Owner/User Agency.

Council: Refers to the members of the Governor's "Council on Boiler Safety". 29 Del.C. §8211

Decal: A three-part report filled out by inspector at time of inspection. White copy is left at location, yellow copy is submitted to Division of Boiler Safety, and pink copy is inspectors'. This is notification the object has been inspected.

Department: Department of Public Safety.

Division: Division of Boiler Safety.

Deputy Inspector: An inspector employed by the State of Delaware, Division of Boiler Safety.

Director: Director of the Division of Boiler Safety.

Existing Installations:

- Any power or miniature boiler installed before January 1, 1924.
- Any electrically heated pressure vessel installed before August 8, 1953.
- Any steam heating, hot water supply or hot water heating boiler installed before May 11, 1954.
- Any pressure vessel installed before June 30, 1974.

External inspection: An inspection of the exterior surfaces as defined in NBIC, when a boiler or pressure vessel is connected for use.

External piping:

- Power boilers- any pipe or fitting connected between the boiler and those limits

defined in ASME B31.1.

- Low pressure boilers and pressure vessels - any pipe or fitting connected between the boiler, water heater, or pressure vessel and the first circumferential joint.

F: Fahrenheit.

HLW: Part of ASME Code, Section IV, dealing with potable water heaters.

Inspector: A Deputy Inspector, Special Inspector, or an Owner/User Inspector.

Internal inspection: An inspection of the interior surfaces of a boiler or pressure vessel, as defined in the NBIC, with implementation of preparation and safety procedures.

MTR: Material Test Report.

MAWP: Maximum Allowable Working Pressure.

National Board: "The National Board of Boiler and Pressure Vessel Inspectors".

National Board Commissioned Inspector: An individual who holds a valid and current National Board Commission.

NBIC: National Board Inspection Code - The manual for boiler and pressure vessel inspectors, published by the National Board of Boiler and Pressure Vessel Inspector, from which copies may be obtained.

NDE: Non-Destructive Examination.

owner or user: Any person, firm, or corporation owning or operating any boiler, pressure vessel or nuclear installation within this state.

Owner/User Inspector:

- An Inspector employed by an Owner-User Agency, as described in the NBIC.
- A Delaware Commissioned Inspector who has been issued a Delaware Certificate of Competency and works for a recognized Owner/User in the State of Delaware.

Place of public assembly: Any establishment, building or any portion thereof within this State intended and used for occupation by persons while employed therein for compensation of any kind, and any commercial structure or location to which the public has access. This shall include, but not be limited to - apartment buildings, schools, day care centers, nursing homes, hospitals, theaters, houses of worship and sporting arenas.

psi: pounds per square inch

psig: pounds per square inch gauge.

Portable Boiler: An internally fired boiler primarily intended for temporary location, and the construction and usage of which is obviously portable.

Pressure Retaining Item (PRI): Any boiler, pressure vessel, piping, or material used for the containment of pressure, either internal or external. The pressure may be obtained from an external source, or by the application of heat from a direct source, or any combination thereof.

Pressure Vessel: Containers for the containment of pressure, either internal or external. The pressure may be obtained from an external source or by the application of heat from a direct or indirect source, or any combination thereof.

Repair: The work necessary to restore pressure retaining items to a safe and satisfactory condition such that the existing design requirements are met.

Secretary: The Secretary of the Department of Public Safety.

Shop Review: A general survey and examination of a boiler or pressure vessel manufacturing or repair firm's facilities, methods and records. The examination is performed by a designee of the ASME, and/or the National Board.

Special Inspector: A National Board Commissioned Inspector, or an AI, employed by an insurance company authorized to write boiler and pressure vessel insurance in Delaware.

Standard Boiler or Pressure Vessel: A boiler or pressure vessel which bears the stamp of the ASME and which are registered with the NB. Such items shall bear the ASME Code Symbol Stamp and the NB Registration number.

Note: Cast iron heating boilers are exempted from National Board Registration.

State Special Number: A Delaware Registration Number assigned to a boiler or pressure vessel of non-standard design.

2.0 Scope

2.1 Any boiler or pressure vessel within the scope of these rules and installed in a place of public assembly, shall be subject to field inspection. Exempt boilers and Pressure Vessels are listed in the Administrative Section of these Rules and Regulations.

3.0 Codes and Standards:

3.1 The State of Delaware Division of Boiler Safety has adopted the ASME Boiler and Pressure Vessel Codes for construction and stamping, including CSD-1 for controls and safety devices. Standards referenced by these rules are: ASME Code Sections I, II, III (all Sections), IV, VIII (Div.1, 2 and 3), X, XI, CSD-1, B31.1 (for boiler external piping), and Code Cases. Interpretations are not part of the ASME and National Board Codes and will be handled on a case by case basis.

3.2 The National Board Inspection Code has been adopted for repairs and alterations.

3.3 All Standards listed above refer to the latest accepted edition and addenda.

4.0 Administration

4.1 Duties of Inspectors and Insurance Companies:

4.1.1 Inspectors shall:

4.1.1.1 Submit completed boiler or pressure vessel reports to the division within 30 days of inspection. First time inspections shall be submitted on the National Board Form NB-7 or the Delaware First Inspection Report (Sample Form Exhibit 5). Electronic reporting does not require submission of hard copies.

4.1.1.2 Report immediately to the Director the name of the owner or user who is operating any boiler or pressure vessel (a) without a valid certificate of inspection, or, (b) in an unsafe condition.

4.1.1.3 Report to the Director all accidents involving boilers and pressure vessels when informed of such accidents by the owner/user.

4.1.2 It shall be the duty of the insurance company to notify the Division of installations on which insurance is accepted, refused, cancelled, or suspended. Such reports shall give detailed account of any unsafe conditions and shall be submitted within 30 days of such insurance acceptance or refusal.

4.2 Shop Inspections:

4.2.1 The shop inspections required by any applicable section of the ASME Boiler & Pressure Vessel Code shall be made by an Inspector who holds a valid commission issued by the National Board of Boiler & Pressure Vessel Inspectors, and having a valid "A" or "B" endorsement. A Certificate of Competency card, issued by the Division of Boiler Safety, is required for all inspectors. An AI inspecting nuclear components requires the "N" endorsement.

4.3 Shop Reviews:

4.3.1 ASME and National Board Shop reviews shall be conducted by an ASME representative, a National Board representative, or the Division of Boiler Safety.

4.4 Examining Board:

4.4.1 The Council on Boiler Safety shall act as the "Examining Board" as required by the National Board for the purpose of administering the National Board test for the certification of competency. With the Council on Boiler Safety member's approval, the Director may appoint alternates for the National Board examination.

4.5 Conflict of interest:

4.5.1 An Inspector shall not engage in the sale of any services, article or device relating to boilers, pressure vessels, or their appurtenances.

4.6 Appeals:

4.6.1 The Director of Boiler Safety may suspend or revoke a Certificate of Competency or a Commission, after due investigation for willful falsification of any matter or statement contained in his application, or in a report of any inspection made by him/her, and for any other finding of improper conduct. Written notice of any such suspension or revocation as required by 29 Del C. § 1031(c), shall be given by the Director to the inspector and his employer. An inspector whose certificate of competency or commission has been suspended or revoked shall be given ten days to appeal the decision to the Secretary of Public Safety. The notice of any proceedings shall conform to 29 Del. C. § 10122.

4.6.2 Appeal from decision of Inspectors

4.6.2.1 If the owner or user of any boiler, pressure vessel or nuclear installation disagrees with the Inspector, as to the necessity for shutting it down for making repairs or alterations to it, or taking any other measures for safety that may be requested by the Inspector, the owner or user may appeal the decision of the Inspector to the Director within an

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acceptable time limit as determined by the Director according to the severity of the violation. The owner/user will be notified of the time limit for appeal in the notice of violation. In case of a disagreement with the Director, an appeal may be filed with the Secretary, who will review the decision and may order another inspection, as the Secretary may deem necessary to decide the issue.

4.7 Accident

4.7.1 The owner or user shall notify the Division of Boiler Safety when an accident occurs that renders a boiler or pressure vessel inoperative. In the case of a serious accident, as in a personal injury or an explosion, notice shall be given immediately by telephone. No boiler, pressure vessel, or parts thereof involved in the accident, shall be removed or disturbed before an investigation can be conducted, except for the purpose of conserving human life and limiting consequential damage.

5.0 Manufacturers

5.1 Construction Standards

5.1.1 Boilers, pressure vessels, nuclear components and component parts to be installed for use in the State of Delaware, shall be designed, fabricated, inspected, stamped and installed in accordance with current applicable Sections of the ASME Boiler and Pressure Vessel Code, and these Rules and Regulations.

5.2 Stamping

5.2.1 Boilers, pressure vessels and nuclear components shall be stamped with the applicable ASME Code stamping and a National Board number or a Delaware Special number, or the ASME Code Symbol and the word ("USER"), and if electrically heated a nationally recognized testing agency, such as, but not limited to the Underwriters Laboratory. Note: Cast Iron boilers do not require National Board Registration.

5.2.2 The required stamping shall be visible for inspection and not permanently covered.

5.3 State Special:

5.3.1 If a boiler, pressure vessel or nuclear component is of special design and can not be built to the ASME Code, and have the ASME Code Symbol, and National Board or USER stampings, a permit for a State Special must be applied for in writing by the Delaware user. Blueprints, design data, calculations and specifications shall be prepared by a Registered Professional Engineer, knowledgeable in the appropriate Code of Construction, and submitted to the Division of Boiler Safety prior to construction.

6.0 Installation

6.1 A new boiler or pressure vessel installation, including a reinstalled or secondhand boiler or pressure vessel, shall be installed in accordance with:

6.1.1 The ASME Code.

6.1.2 Delaware Rules and Regulations.

6.1.3 ASME CSD-1

6.1.3.1 Part CF of CSD-1 shall be met when the installing contractor submits an operational test form CSD-1 Appendix C or a form containing the same information. (Exhibits 1 & 2)

6.1.3.2 Part CM - The preventive maintenance schedule will be determined by the owner or user.

6.1.4 The NBIC.

6.2 If a condition is not covered by these regulations, the applicable provisions of the ASME Code or NBIC govern.

6.3 External piping shall be made of materials accepted by the ASME Code.

6.4 It shall be the duty of the insurance company to notify the Division of installations on which insurance is accepted, refused, canceled, or suspended. Such reports shall give a detailed account of any unsafe conditions, and shall be submitted within 30 days of such insurance acceptance or refusal.

6.5 Installation Registration

6.5.1 The installation of any boiler or pressure vessel within the scope of these rules, and installed in a place of public assembly, shall be registered with the Division by the installer before the operation of the boiler or pressure vessel. (Exhibit 4) The boiler may be operationally tested prior to obtaining a certificate.

6.6 Clearances

6.6.1 All Boiler & Pressure Vessel installations shall have adequate clearance around the object so that inspections can be made, and service technicians may work safely. Adequate clearance shall be 30 inches minimum for boilers, and as specified by the manufacturer for pressure vessels. If adequate clearance is not available, a variance must be obtained from the Director of the Division of Boiler Safety.

6.7 Power Boilers

6.7.1 New Installations

6.7.1.1 Ladders and runways. Steel runway or platform, at least twenty-four (24") inches wide, and provided with standard handrails and toe boards on either side, with at least 7' 6" head room, shall be installed across the tops of adjacent boilers, or at some other convenient level, for the purpose of affording safe access to the boilers. All runways shall have at least two (2) means of exit, each exit to be remotely located from the other and connected to a permanent stairway or inclined ladder leading to the floor level.

6.7.1.2 Exit from boiler rooms - all boiler rooms exceeding five hundred (500) square feet of floor area and containing one or more boilers having a fuel burning capacity of 1,000,000 BTU's shall have at least two (2) means of exit, one of which shall lead outside.

6.7.1.3 Explosion doors - if used and if located in the setting walls, within seven (7) feet of the firing floor or operating platform, shall be provided with substantial deflectors to divert the blast.

6.8 When a standard boiler, pressure vessel, or nuclear component located within this jurisdiction is to be moved outside the jurisdiction for repair, alteration, or modification, it shall be documented on the appropriated "R" form. Copies of all "R" forms shall be forwarded to the Division. Routine Repairs are not required to be filed with the division.

6.9 The installation or operation of non-standard boilers, pressure vessels, or nuclear components in this jurisdiction without prior permission from the Director is prohibited.

6.10 Steam Boiler Blow Down Tanks and Receivers

6.10.1 Blow-off piping from a power boiler shall not discharge directly into a sewer or interconnected system. A blow-off tank shall be used where conditions do not provide adequate and safe open discharge and shall be placed between the boiler and the sewer or other such system.

6.10.2 Pressure or unvented blowdown tanks:

6.10.2.1 A blowdown tank subject to possible maximum steam boiler pressure shall be constructed for the boiler pressure and stamped in accordance with the ASME Code.

6.10.3 Atmospheric or vented blowdown tanks:

6.10.3.1 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.

6.10.3.2 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.

6.11 Construction of blowdown tanks

6.11.1 The minimum metal thickness of blowdown tanks, whether of the pressure or atmospheric type, shall be not less than five-sixteenths inch.

6.11.2 All blow down tanks, whether of the closed or vented type, shall have approved openings for cleaning and inspection, and shall be capable of a maximum discharge of 150 degrees Fahrenheit at five (5) PSIG.

6.12 Centrifugal type separators:

6.12.1 Centrifugal type separators shall be built and stamped in accordance with the ASME Code.

6.12.2 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.

6.12.3 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.

7.0 Non-standard Boilers or Pressure Vessels

7.1 Non-standard high-pressure boilers, which were installed in the State of Delaware prior to January 1, 1924, shall be subject to the rules of the ASME Boiler Code for calculations and installation. Non-standard pressure vessels installed prior to June 30, 1974, shall be calculated and installed in accordance with ASME Code Section VIII, and the following rules:

7.1.1 Factors of Safety. The minimum factor of safety may not be less than 4 for existing installations. The factor of safety may be increased when it is considered necessary by the inspector to insure the operation of the vessel within safe limits. The condition of the vessel and the particular service to which it is subject shall be the determining factors.

7.1.2 Any boilers or pressure vessels over 30 years old; the factor of safety shall be increased by not less than five-tenths; provided however that after a thorough internal and external yearly inspection the pressure allowed may be continued at its present factor of safety. The owner or user of such boiler or pressure vessel shall prepare the boiler for hydrostatic pressure test by uncovering all riveted joints.

7.1.3 The owner/user and the AI shall agree what further NDE will be required to verify the integrity of the vessel.

7.1.4 When a non-standard boiler, pressure vessel, or nuclear component is removed from this jurisdiction for reason other than repair or alteration, it shall not be brought back and installed within this State.

7.1.5 Maximum Allowable Working Pressure for Non-standard Pressure Vessels.

7.1.5.1 Internal Pressure. The maximum allowable working pressure on the shell of a nonstandard pressure vessel is determined by:

7.1.5.1.1 The strength of the weakest course computed from the thickness of the plate.

7.1.5.1.2 The tensile strength of the plate.

- 7.1.5.1.3 The efficiency of the longitudinal joint.
- 7.1.5.1.4 The inside diameter of the course.
- 7.1.5.1.5 The factor of safety set by these rules.

$$\text{maximum allowable working pressure, psig} = \frac{\text{TS}t + E}{\text{RFS}}$$

Where:

TS = Ultimate tensile strength of shell plate, PSI. When the tensile of shell plate is not known, it shall be taken as 55,000 PSI for temperatures not exceeding 700 F.

t = Minimum thickness of shell plate of weakest course, inches.

E = Efficiency of longitudinal joint depending upon construction. Use the following values: for riveted joints the calculated riveted efficiency; and for fusion-welded and brazed joints:

	Percent
Single Lap Weld	40
Double Lap Weld	60
Single Butt Weld	60
Double Butt Weld	75
Forge Weld	70
Brazed Steel	80

R = Inside radius of weakest course of shell, inches, provided the thickness does not exceed 10 percent of the radius. If the thickness is over 10 percent of the radius, the outer radius shall be used.

FS = Factor of safety allowed by these rules.

7.1.5.2 External Pressure: The maximum working pressure for cylindrical nonstandard pressure vessels subjected to external or collapsing pressure shall be determined by the rules in the appropriate ASME Code Section VIII, Div. I, 2, or 3

7.1.6 A State Special number may be assigned to a boiler or pressure vessel of non-standard design. All designs and specifications must be submitted to the Division for approval and must include:

7.1.6.1 Drawings and calculations certified by a mechanical engineer from the original manufacturer, or a Delaware registered professional engineer.

7.1.6.2 Material test reports certified by the original manufacturer or a material testing laboratory.

7.1.6.3 Report of a pressure test certified by the owner and a Delaware commissioned Inspector.

7.1.6.4 Report of an internal & external inspection by a Delaware commissioned Inspector.

7.1.6.5 Establish that welding meets the requirements of the ASME code.

7.1.6.6 If any of the above documentation has been lost, it will be necessary to fulfill the basic requirements by some other means acceptable to the Director.

8.0 Inspections

8.1 Access for inspection.

8.1.1 The Secretary, Director, Deputy Inspector, Special Inspectors, or members of the Council on Boiler Safety, shall have full access during reasonable hours to any premises in

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the State, where a boiler, pressure vessel or nuclear component within the scope of these Rules and Regulations is being constructed, installed, connected for use or operated, to ascertain compliance with these Rules and Regulations. Immediate access must be provided upon event of an accident.

8.2 Inspection Requirements

8.2.1 High-pressure boilers, miniature boilers and high-pressure high temperature water boilers shall receive a certificate of inspection annually. They shall also be inspected internally annually. The external (in service) inspection should be done within six months of the internal inspection.

8.2.2 Low-pressure steam heating boilers, hot water heating boilers, hot water supply boilers, and lined water heaters, shall be given a certificate of inspection biennially. This inspection may be an external inspection, unless the Inspector requires an internal inspection. The Inspector, due to operating conditions, may require additional inspections.

8.2.3 All pressure vessels shall be given a certificate of inspection every four years. This inspection may be an external inspection, unless the Inspector requires an internal inspection. The Inspector, due to operating conditions such as corrosive conditions or lethal service, may require additional inspections.

8.3 Certificate Inspections

8.3.1 Certificate inspections will be allowed a grace period of one month beyond the normal inspection date, with extensions to the above, granted only by the Director. A current Certificate of Inspection must have a decal attached by the Inspector using the decals provided by the Division. Violation of this paragraph will subject the owner/user to the penalty, as provided in 29 Del.C. §8210

8.3.2 If, at the discretion of the Inspector, a hydrostatic test or any other test is deemed necessary, it shall be made by the owner or user of the boiler or pressure vessel.

8.3.3 Sufficient covering of the boiler or pressure vessel shall be removed to satisfy the Inspector that he may determine the conditions of the boiler or pressure vessel. If the covering cannot be removed at that time, the inspector may order the operation of the boiler or pressure vessel stopped until such time as the covering can be removed and proper examinations made.

8.3.4 Installing contractor may perform operational tests on boilers prior to obtaining an operating certificate. This is for operational testing only.

8.4 Alternate Internal Inspection Requirements

8.4.1 High-pressure boiler internal inspection may be extended to 24 months; and 48 months for waste heat boilers, if the following requirements are met:

8.4.1.1 Continuous water treating under the general supervision of a trained person with experience in water treatment for the purpose of controlling and limiting corrosion and deposits.

8.4.1.2 Record keeping available for review showing:

8.4.1.2.1 The date and time boiler is out of service and the reason therefore.

8.4.1.2.2 Daily analysis of water samples that will adequately show the condition of such water and any elements or characteristics which are capable of producing corrosion or other deterioration of the boiler or its parts.

8.4.1.3 Annual external inspections performed by an Inspector with review of records in 8.4.1.1 and 8.4.1.2 above.

8.4.1.4 Applicable NDE, if required by the Inspector. Records are to be

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maintained at least six (6) years. In order to qualify for such an extension, a written request to the Director must be made. This extension, when granted, is good until revoked.

8.4.2 The Director upon written requests may grant other extensions from the owner user with approval of the AIA.

8.5 Condemned boiler or pressure vessel

8.5.1 This is a vessel that is declared unsafe by an Inspector, due to an irreversible defect, and removed from service. It shall be stamped as follows:

8.5.1.1 XXXDELXXX -- adjacent to original stamping

8.6 The inspections required by this Section shall be made by the Director, by a Deputy Inspector, an Owner/User inspector, or by a Special Inspector.

8.6.1 If an owner or user of equipment, specified by this Section, obtains an insurance policy on such equipment from an insurance company licensed by the Delaware Insurance Commissioner's Office to insure boilers and pressure vessels, the Special Inspector employed by that insurance company shall conduct the inspection required by this Section.

8.6.2 An Inspector employed by an Owner-User may conduct the inspections on pressure vessels owned by that company in lieu of a State or Insurance Company Inspector.

9.0 Certificate of Inspection

9.1 Issuance of Certificate

9.1.1 If upon making the required inspection, the Inspector finds the boiler, pressure vessel or nuclear installation to be in a safe working order, including all necessary safety devices shall submit a report to the Division of Boiler Safety. The Division of Boiler Safety, either electronically or upon receipt of the inspection report (hard copy) from said Inspector, and the fee mentioned hereafter paid, shall issue a Certificate of Inspection. The certificate shall be posted on or near the object.

9.1.2 At the time of the first inspection, the Inspector shall leave a decal at the site. The second part of the decal is to be affixed to the lower right hand corner of report, and sent to the Division.

9.1.3 On subsequent inspections, the Inspector will attach the decal to the Certificate of Inspection, and likewise affix the second portion of the decal to the lower right hand corner of the inspectors request form. Any corrections or changes to this inspector's request form will be circled and changes noted and returned to the Division. If reports are submitted electronically, no decals or hard copies of report have to be submitted to the Division.

9.1.4 In the event of a violation or unsafe condition, the Inspector will affix to the Certificate a red "fail" sticker. He will note on his Inspector's request, a written explanation and will attach a signed decal marked "fail", and return the inspection request to the Division. No decal or hard copy of report is required if report is submitted electronically.

9.2 Certificates for boilers, pressure vessels or nuclear installations

9.2.1 Every Inspector inspecting boilers, pressure vessels or nuclear installations in the State of Delaware shall file with the Director the applicable inspection report within thirty (30) days, after the date of inspection.

9.3 Certificate withdrawn, withheld, or revoked.

9.3.1 If an Inspector finds that the boiler, pressure vessel or nuclear installation is not in safe working condition, or is not provided with the necessary safety appurtenances, or if the appurtenances are improperly arranged, he shall immediately notify the owner or user, and the person in charge of the boiler, of the code violations. He shall report the same to the Director, who shall place or cause to be placed on it an official State seal to

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prevent use of said boiler, pressure vessel or nuclear installation and its appurtenances, until it is put in condition to insure safety of operation. The owner and/or user shall not operate it or permit it to be operated, until such Certificate has been granted or restored.

10.0 Safety and Relief Valves and Rupture disks.

10.1 Installation of pressure relief valves, safety valves and rupture disks shall be in accordance with the NBIC and the appropriate Section of the ASME Code. A hot water supply boiler, including lined water heaters stamped HLW shall have a pressure temperature relief valve marked 210 F.

10.2 When any of the safety/relief valves require repairs or adjustments, these adjustments must be made by the manufacturer or an appropriate "VR" stamp repair company, and tested either before reinstallation or immediately upon placing the boiler, pressure vessel or nuclear installation in service.

10.3 No person shall load or adjust safety/relief valves in any matter to maintain a working pressure in excess of that stated on the certificate of inspection.

10.4 The owner/user shall assure that the safety valve(s) is functional at all times.

10.5 All low-pressure boiler safety and relief valves shall be tested by hand or bench tested at the time of inspection.

10.6 All high pressure boiler safety valves shall be hand tested or bench tested for set pressure and blowdown at the time of inspection or within the maximum allowable inspection interval provided by these regulations. In lieu of bench testing, the hydraulic lift system is acceptable. All high-pressure boiler safety valves for pressures over 400 PSIG shall be overhauled every five(5) years.

10.7 All pressure vessel relief valves shall be hand tested or bench tested for set pressure at the time of inspection or within the allowable inspection interval permitted by these regulations. In lieu of bench testing, the hydraulic lift system is acceptable. The frequency may be extended when supported by performance records of the individual user. For liquids or gasses, which are hazardous or costly and inservice testing is impractical, bench testing/replacement frequency shall be left to the owner/user.

10.8 Bench testing is only acceptable if the bench testing apparatus can deliver proper pressure and volume. Sufficient volume should be enough to lift the pressure relief valve fully open.

10.9 Pressure vessel relief valves on installations must be overhauled or replaced every four (4) years where there is documented corrosion, deterioration of valve parts, product build up, or the possibility of plugging in the inlet or outlet, or sticking of the disc to the seat.

11.0 Antique Boilers

11.1 Antique boilers include any closed vessel manufactured prior to January 1, 1924, and used solely for display and demonstration purposes, in which water is heated or steam is generated by the direct application of heat from the combustion of fuels.

11.1.1 An AI shall inspect antique boilers and remaining material thickness will be determined by a method acceptable to the AI. The MAWP based on these Rules and Regulations, as determined by a Registered Professional Engineer knowledgeable in power boiler fabrication, shall be submitted to the Director for his review and acceptance.

11.1.2 All antique boilers shall be inspected annually by an AI and shall include the following:

11.1.2.1 A hydrostatic test at 1 1/4 times the MAWP

11.1.2.2 ASME approved fusible plug installed and in good condition.

Fusible plug shall be removed annually to check condition. .

11.1.2.3 A safety valve meeting current ASME and National Board requirements set at or below the MAWP, with required relieving capacity, and tested, as required by these regulations. The seals on the valve shall be intact. Outlet of safety valve shall be piped to a safe point of discharge.

11.1.2.4 A visual examination for any evidence of corrosion or leakage to include the boiler piping up to the first valve.

11.1.2.5 Any other requirements specified in the Division regulations.

11.1.3 Approval for operation of an antique boiler will be granted upon successful completion of the above inspection requirements and payment of the fee required. A Certificate will be issued and shall be valid for a period not to exceed 12 months. A fee of \$15.00 shall be charged for inspections and a fee of \$15.00 shall be charged for the certificate. A current operating certificate shall be posted while in operation.

11.1.4 Alternate approval may be given to operate an antique boiler having a valid certificate from another State, whose requirements have been determined by the Division to meet or exceed these requirements.

11.1.5 Request for approval must be submitted 30 days before operation.

12.0 Repairs or Alterations by Fusion Welding

12.1 Repairs and alterations to boilers and pressure vessel shall comply with:

12.1.1 The original construction standard, or later editions of the construction standard,

12.1.2 The latest accepted edition of the National Board Inspection Code, and

12.1.3 These Rules & Regulations.

12.2 All repairs or alterations to boilers, pressure vessels or piping within jurisdictional limits, shall be approved by a Delaware commissioned AI and performed under his guidance.

12.3 The organization making the repair or alteration shall possess a valid National Board Repair Certificate of Authorization

12.3.1 National Board Repair Certificate of Authorization is required for any repair work performed in or out of the manufacturer's premises.

12.3.2 Design changes shall be certified by an organization having an approved Q.C. Program, which includes control of drawings, design calculations and specifications. These controls shall meet or exceed ASME requirements.

12.3.3 The work shall be within the scope of their Q.C. program.

12.4 An R-1 "Record of Welded Repair" shall be filed with the Division of Boiler Safety with the Delaware jurisdiction number clearly identified.

12.5 An R-2 "Report of Alteration" with a copy of the manufacturer's data report shall be filed with the Division, with the Delaware jurisdiction number clearly identified.

12.6 Repairs of a routine nature as defined by the NBIC need not have a "Report of Welded Repair" submitted to the Director, but this repair documentation must be retained by the owner/user as long as the object remains in service. "Routine Repair" shall be entered in "Remarks" section of the R-1 Form.

12.7 Lap Seam Cracks

12.7.1 The shell or drum of a boiler or pressure vessel in which a lap seam crack is discovered along a longitudinal riveted joint shall be immediately condemned and permanently removed from service. Repairs of this type defect are prohibited.

12.8 Riveted Patches

12.8.1 In applying riveted patches, the design of the patch and method of installation shall be in accordance with the NBIC, 1973 edition.

12.9 Repair, modification or replacement of nuclear components

12.9.1 Repair, modification or replacement of nuclear components shall be made only by an organization which holds a valid Certificate of Authorization for use of the National Board nuclear "NR" symbol stamp. Repair, modification or replacement of ASME stamped "NV" pressure relief valves shall be made only by an organization which holds valid National Board Certificates of Authorization for use of the "NR" and "VR" symbol stamps.

12.10 Restamping of Boilers and Pressure Vessels shall be in accordance with the NBIC.

13.0 Fees

13.1 Inspection and certificate of inspection fees:

13.1.1 The owner and/or user of a boiler, pressure vessel or nuclear installation required to be inspected under these Rules & Regulations shall pay the required fees.

13.1.2 All checks should be made payable to the Division of Boiler Safety and sent directly to the office by the owner and/or user.

13.2 Certificate of Inspection Fees:

13.2.1 Boiler and pressure vessel certificate fees are \$7.50 annually.

13.3 Inspection Fees:

13.3.1 Power Boilers & High Pressure/High Temperature Hot Water Boilers:

13.3.1.1 Internal inspection under 5 HP	\$15.00
5 HP up to 99 HP	\$25.00
99 HP up to 200 HP	\$35.00
Over 200 HP, on an hourly basis with a minimum of	\$50.00

13.3.1.2 External Inspection \$15.00

13.3.2 Heating Boilers and Hot Water Supply Boilers:

13.3.2.1 Without a manhole \$15.00

13.3.2.2 With a manhole \$25.00

13.3.3 Water heater \$10.00

13.3.4 Pressure Vessels

13.3.4.1 The required inspection fee shall be based on the cross-sectional area in square feet obtained by multiplying the square of the external diameter of the vessel in feet by 0.7854. For rectangular vessels, the product of the two greatest external dimensions in feet i.e., length by either width or depth, whichever is greater. For jacketed vessels, the product of the greatest external diameter in feet or width of outside shell and the greatest length or depth in feet of the outside shell.

Fifty (50) square feet or less \$10.00

Each additional 100 square feet or fraction thereof in excess of 50 square feet \$20.00

13.3.4.2 A group of pressure vessels such as rolls of a paper machine or a dryer operating as a single machine or unit shall be considered as one pressure vessel and the inspection fee shall be based on the actual hourly inspection time.

13.3.5 Hydrostatic tests

13.3.5.1 When it is necessary to make a special trip to witness the application of a hydrostatic test, the fee for such service shall be based on the actual hourly

inspection time including travel. The entire expense of applying the hydrostatic test shall be borne by the owner and/or user.

13.3.6 Nuclear Installations

13.3.6.1 The inspection fee is based on actual hourly inspection time at an hourly or daily rate determined by the Director of the Division of Boiler Safety, dependent on the type of qualified personnel necessary to perform the required safety inspections.

13.3.7 Shop Reviews

13.3.7.1 A fee of \$1500 per review, requires a team leader and if available, team member to be present. A fee of \$800 per review, if only National Board authorization to repair or alter ASME stamped boilers and pressure vessels is requested.

13.4 Miscellaneous Fees:

13.4.1 Inspectors Commission Fees

13.4.1.1 National Board Examination

\$75.00, for Delaware resident; \$150, non-Delaware resident.

13.4.1.2 Examination for a Delaware Inspector Commission \$50

13.4.1.3 Biennial (2 yr.) Commission Credential card renewal \$25

13.4.1.4 Replacement of lost or destroyed Commission \$20

13.4.2 Permit for State Special

13.4.2.1 Boiler or Pressure Vessel \$500 minimum

13.4.2.2 Nuclear installation \$2000 minimum

14.0 Gas Water Heaters Suitable For Potable Water And Space Heating

14.1 Units Covered

14.1.1 Gas water heaters, which are suitable for potable water and space heating, shall be covered by this Section provided the water heater does not exceed any of the following limitations:

14.1.1.1 Maximum heat input of 200,000 BTU per hour or 58,600 watts;

14.1.1.2 Maximum water temperature limit of 210 degrees Fahrenheit (99 degrees Celsius); or

14.1.1.3 Nominal water containing capacity of 120 gallons (454.2 L).

14.1.2 This Section shall cover the water heater, heat exchanger, coil or any other device connected directly or indirectly to the water heater and used to supply potable hot water and space heating.

14.2 Gas Water Heaters Suitable for Potable Water and Space Heating with Input Ratings of 75,000 BTU per Hour or less

14.2.1 In addition to the requirements in Subsection A of this Section, gas water heaters suitable for potable water and space heating with input ratings of 75,000 BTU per hour or less shall also be constructed and installed in accordance with the American National Standard for Gas Water Heaters, Volume 1, ANSI Z21.10.1, current edition and addenda, including, but not limited to Z21.10.1a, current edition and addenda, as well as all applicable Federal, State and local laws and regulations. Water heaters covered by this Section are not required to be constructed to the standards set forth in Section IV, ASME Boiler and Pressure Vessel Code, except to the extent required by ANSI Z21.10.1, current edition and addenda.

14.3 Gas Water Heaters Suitable for Potable Water and Space Heating with Input Ratings in excess of 75,000 BTU per Hour but with a Maximum of 200,000 BTU per Hour

14.3.1 In addition to the requirements of 14.1 of this Section, gas water heaters suitable for potable water and space heating, with input ratings in excess of 75,000 BTU per

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hour, but not more than 200,000 BTU per hour, shall be constructed and installed in accordance with the American National Standard for Gas Water Heaters, Volume III, ANSI Z21.10.3 , current edition and addenda, as well as applicable Federal, State and local laws and regulations.

14.4 Limitations

14.4.1 All units covered by this Section shall not be connected to any existing non-potable water heating system.

14.4.2 No more than one (1) unit covered by this Section shall be connected to a circulating system.

14.4.3 This Section shall not apply to closed loop systems.

14.5 Inspection

14.5.1 Exemption from field inspection of units covered by this Section shall be governed by 29 Del.C. §8210.

14.5.2 These exempt water heaters shall be equipped with ASME Code approved pressure/temperature relief valves.

14.6 Oil fired combination service water heating or space-heating equipment shall meet the requirements of the ASHRAE/IES 90.1, current edition and addenda.

15.0 Variances

15.1 The Director of the Division of Boiler Safety shall have the authority to grant a variance, on a case by case basis, to those rules and regulations that pertain to the installation of new boilers to replace existing boilers. The variance shall be in writing describing all pertinent information regarding the variance requested and the reason for the request.

16.0 Complaints

16.1 When the division receives a complaint a boiler or pressure vessel is being operated in an unsafe condition or does not meet codes, an investigation shall be conducted by either a State Deputy Boiler Inspector, or by the inspector employed by the insurance company carrying

boiler machinery insurance on the object. A report will be submitted to the Director of Boiler Safety, and appropriate action will be taken depending on the conditions found.

17.0 Severability

17.1 If any part of these Rules and Regulations are held invalid, unconstitutional, or otherwise contrary to law, then it shall be severable and the remaining portions hereof shall remain and continue in full force and effect.

APPENDIX C – MANUFACTURER'S/INSTALLING CONTRACTOR'S REPORT FOR ASME CSD-1

Certification and Reporting (CG-500) for Controls and Safety Devices

(This Form is a guideline and is not part of ASME CDS-1 1998.)

Unit Manufacturer

Name _____

Address _____ Zip _____

Telephone _____ Fax _____

Unit Identification (Boiler)

Manufacturer's Model # _____ Year Built _____

ASME # _____ Nat. Bd. # _____

UL # _____ AGA # _____

Jurisdiction _____

Steam Hot Water

Max W.P. _____ psig Max. W.P. _____ psig

Min. Safety Valve Cap. _____ PPH Max. Temp. _____ ° F

Min. Safety Relief Valve Cap. _____ PPH or Btu

Boiler Unit Description (Type) _____

If Modular (No. of Modules) _____

Boiler Unit Capacity (Output) _____

Burner

Manufacturer _____ Model _____

UL or AGA # _____ Serial # _____

Fuels (as Shipped) _____

Installation Location (if known)

Customer Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Control/Device	Manufacturer	Model	Operational Test Performed, Date
Operating Controls			
Low-Water Fuel Cutoff CW-120(a), CW-140	_____	_____	_____
Forced Circulation CW-210(a)	_____	_____	_____
Steam Pressure CW-310(b)	_____	_____	_____
Water Temperature CW-410(b)	_____	_____	_____
Safety Controls			
Low-Water Fuel Cutoff CW-120(a), CW-120(b) CW-130, CW-140	_____	_____	_____
Forced Circulation CW-210(b)	_____	_____	_____
High Steam Pressure Limit CW-310(c)	_____	_____	_____
High Water Temperature Limit CW-410(b)	_____	_____	_____
Fuel Safety Shutoff Valve, Main CF-180(b)(2), CF-180(b)(3)	_____	_____	_____
Pilot Safety Shutoff Valve CF-180(c)	_____	_____	_____
Atomizing Medium Switch CF-450(b)	_____	_____	_____
Combustion Air Switch CF-220	_____	_____	_____
High Gas Pressure CF-162	_____	_____	_____
Low Gas Pressure CF-162	_____	_____	_____
Low Oil Pressure CF-450(a)	_____	_____	_____
High Oil Temperature CF-450(c)	_____	_____	_____
Low Oil Temperature CF-450(d)	_____	_____	_____
Purge Air Flow CF-210	_____	_____	_____
Flame Safeguard (Primary) CF-310, CF-320	_____	_____	_____

Low Fire Start

Low Fire State Switch
CF-610

Safety or Safety Relief Valve(s)
CW-510, CW-520

Manufacturer _____ Operational Test Performed, Date ____/____/____

Model _____

Size _____

Capacity _____ PPH/Btu/hr

Representing Equipment Manufacturer, Name _____

Signature _____ Date _____

Representing Installing Contractor, Name _____

Signature _____ Date _____

**Delaware Division of Boiler Safety
INSTALLING CONTRACTOR'S Operational REPORT**

Installation Location

Owners Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____ Fax _____

Unit Manufacturer

Name _____

Unit Identification (Boiler)

Manufacturer's Model # _____ Year Built _____
ASME # _____ Nat. Bd. # _____
Jurisdiction _____

Steam Hot Water

Max W.P. _____ psig Max. W.P. _____ psig
Min. Safety Valve Cap. _____ PPH Max. Temp. _____ ° F
Min. Safety Relief Valve Cap. _____ PPH or Btu

Boiler Unit Description (Type) _____

If Modular (No. of Modules) _____

Boiler Unit Capacity (Output) _____

Burner

Manufacturer _____ Model _____

Fuels (as Shipped) _____

Control/Device	Manufacturer	Model	Operational Test Performed, Date
Operating Controls			
Low-Water Fuel Cutoff CW-120(a), CW-140	_____	_____	_____
Forced Circulation CW-210(a)	_____	_____	_____
Steam Pressure CW-310(b)	_____	_____	_____
Water Temperature CW-410(b)	_____	_____	_____
Safety Controls			
Low-Water Fuel Cutoff CW-120(a), CW-120(b) CW-130, CW-140	_____	_____	_____
Forced Circulation CW-210(b)	_____	_____	_____
High Steam Pressure Limit CW-310(c)	_____	_____	_____
High Water Temperature Limit CW-410(b)	_____	_____	_____
Fuel Safety Shutoff Valve, Main CF-180(b)(2), CF-180(b)(3)	_____	_____	_____
Pilot Safety Shutoff Valve CF-180(c)	_____	_____	_____
Atomizing Medium Switch CF-450(b)	_____	_____	_____
Combustion Air Switch CF-220	_____	_____	_____
High Gas Pressure CF-162	_____	_____	_____
Low Gas Pressure CF-162	_____	_____	_____
Low Oil Pressure CF-450(a)	_____	_____	_____
High Oil Temperature CF-450(c)	_____	_____	_____
Low Oil Temperature CF-450(d)	_____	_____	_____
Purge Air Flow CF-210	_____	_____	_____
Flame Safeguard (Primary) CF-310, CF-320	_____	_____	_____

Low Fire Start

Low Fire State Switch
CF-610

Safety or Safety Relief Valve(s)
CW-510, CW-520

Manufacturer _____ Operational Test Performed, Date ____/____/____

Model _____

Size _____

Capacity _____ PPH/Btu/hr

Representing Equipment Manufacturer, Name _____

Signature _____ Date _____

Representing Installing Contractor, Name _____

Signature _____ Date _____

DbS-2(2001)

STATE OF DELAWARE
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF BOILER SAFETY
APPLICATION FOR EXAMINATION

I hereby make application for a Certificate of Competency and/or a Commission as a Special Inspector of Boilers and Pressure Vessels, and certify that the following statements are correct:

Name in full _____ Age _____
(Print or Type)

Birthplace _____ Present residence _____
(City or Town) (State or County) (Number, street, city, state, zip code)

Employed by _____

My business address with the above named Company will be at _____
(Number, street, city, state, zip code)

Are you a citizen of the U.S.? _____

1. School Education _____ Degree _____
(M.E., E.E., C.E., ETC.)

2. BOILER OR PRESSURE VESSEL SHOP EXPERIENCE		
Employer's Name	*Period of Employment	Employed as
	From to	
	From to	
	From to	

3. BOILER OR PRESSURE VESSEL INSTALLATION EXPERIENCE		
Employer's Name	*Period of Employment	Employed as
	From to	
	From to	
	From to	

4. BOILER OR PRESSURE VESSEL OPERATING EXPERIENCE		
Employer's Name	*Period of Employment	Employed as
	From to	
	From to	
	From to	

5. BOILER OR PRESSURE VESSEL INSPECTION EXPERIENCE		
Employer's Name	*Period of Employment	Employed as
	From to	
	From to	
	From to	

**Give month and year of each period of Employment*

6. National Board examinations taken _____ Date _____
(State)

7. Kind of examinations taken _____ Certificate No. _____

8. Are you familiar with the A.S.M.E. Boiler & Pressure Code, The Delaware and National Board Regulations? _____

9. Have you completed any courses in Non Destructive Testing? _____

_____ *school* _____ *dates of attendance* _____ *certificate?*

_____ *instruments used in training* _____ *instruments used in your plant*

10. Experience in inspection of unfired pressure vessels? _____

_____ *years* _____ *company* _____ *type of plant*

11. Have you had training or experience in welding? _____

_____ *school* _____ *employed by* _____ *years*

12. Have you had training or experience in metalurgy? _____

_____ *school* _____ *certificate?* _____ *Dates*

(Only applicable if applying under owner-user provisions Section VIII E-2)

13. Name of Professional Engineer in your plant responsible for the

_____ *Inspection Department* _____ *Degree*

_____ *Delaware P.E. Number* _____ *Date of expiration*

(This application to be sworn to before a Notary Public)

Sworn to and subscribed before me on this, the _____ day of _____

_____ *(Signature of Applicant)*

_____ *Notary Public*

**BOILER AND PRESSURE VESSELL
INSTALLATION REGISTRATION**

**STATE OF DELAWARE
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF BOILER SAFETY**

(Complete appropriate portion)

<p>Send completed form to:</p> <p style="text-align: center;">Division of Boiler Safety P.O. Box 674 Dover, Delaware 19903-0674</p>			<p>BOILER:</p> <p><input type="checkbox"/> Power <input type="checkbox"/> Heating <input type="checkbox"/> Miniature</p>		
			<p><input type="checkbox"/> Pressure Vessel</p>		
			<p><input type="checkbox"/> New <input type="checkbox"/> Used</p>		
NAME OF USER OR OWNER			LOCATION OF INSTALLATION		
STREET ADDRESS			REGISTRATION NO. DE.		NATIONAL BOARD NO.
CITY	STATE	ZIP CODE	MFR. SERIAL NO.		OTHER NO.
NAME OF INSTALLING CONTRACTOR		SIGNATURE OF INSTALLER			DATE
STREET ADDRESS			CITY		STATE
					ZIP CODE

State of Delaware
 Department of Public Safety
 Division of Boiler Safety

REPORT OF INSPECTION

Boiler

Fired Pressure Vessel

Unfired Pressure Vessel

Date Issued				Certificate No.								
1	Date Inspected		Cert. Exp. Date		Certificate Posted	Owner No.	Del. State Number	Nat'l Bld. No.	Other No. #			
	Mo.	Day	Year	Mo.						Year	Yes	No
2	Owner					Nature of Business		Kind of Inspection		Certificate Inspection		
							Int.		Ext.		Yes No	
3	Owner Street Address Number					Owners City		State		Zip		
4	Users Name – Object Location					Specific Location in Plant		Object Location County				
							Users City		State		Zip	
5	Type		Year Built		Manufacturer							
6	Use					Size		Pressure Tested		Gage		
									Yes		No	
7	Pressure Allowed This Inspection			Prev. Inspection		Safety Relief Valves Set At		Fuel		Method of Firing		
8	Is condition of object such that a certificate may be issued?					Hydro Test		Psi.		Date		
	Yes		No		(If no explain fully under conditions)		Yes				No	
9	Annual and/or Biennial Inspection Fee \$					Two Year Certificate Fee \$						
10	<i>CONDITIONS: With respect to the internal surface, describe and state location of any scale, oil or deposits. Give location and extent of any corrosion and state whether active or inactive. State location and extent of any erosion, grooving, bulging, warping, cracking or similar condition. Report on any defective rivets, bowed, loose or broken stays. State condition of all tubes, tube ends, coils, nipples, etc. Describe any adverse conditions with respect to pressure gage, water column, gage glass, gage cocks, safety valves, etc. Report condition of setting, linings, baffles, supports, etc. Describe any major changes or repairs made since last inspected.</i>											

9. Requirements: (List code violations)

10. Name and title of person to whom requirements were explained:

I hereby certify this is a true report of my inspection:

Signature of Inspector	Comm. No.	Employed by Division of Boiler Safety, State of Delaware	Territory No.
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