

13 NCAC 13 .0101 is amended with changes as published in 31:09 NCR 805-810 as follows:

13 NCAC 13 .0101 DEFINITIONS

The following definitions shall apply throughout the ~~rules~~ Rules in this Chapter and shall be construed as controlling in case of any conflict with the definitions contained in ANSI/NB-23 National Board Inspection Code Parts 2 and 3, The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, or The North Carolina State Building Code:

- (1) "Accepted Design and Construction Code" means the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code), or a comparable code with standards that the Chief Inspector determines to be ~~as safe as~~ equivalent to the ASME Code.
- (2) "Appurtenance" means any control, fitting, appliance, or device attached to or working in conjunction with the boiler proper or pressure vessel.
- (3) "ASME Code" means the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers.
- (4) "Audit" means activities, other than ~~those identified as~~ certificate inspections, conducted by the Chief Inspector or his designee. ~~These activities~~ Audits include the following:
 - (a) reviews and surveys for ASME and National Board stamp issuance and renewal;
 - (b) audits conducted ~~on~~ of an authorized inspector at the location of a manufacturer or repair organization as may be required by the ASME Code, National Board Inspection Code, or National Board Rules for Commissioned Inspectors; and
 - (c) audits pursuant to evaluation for the issuance of North Carolina Specials.
- (5) "Automatically fired boiler" means a boiler that cycles ~~automatically~~ in response to a control system and that does not require a constant attendant for the purpose of introducing fuel into the combustion chamber or to control electrical input.
- (6) "Authorized Inspection Agency" means an organization employing commissioned ~~inspectors~~ inspectors, including the following:
 - (a) the ~~Bureau~~ Bureau, as defined in Item (11) of this Rule.
 - (b) an inspection agency of an insurance company licensed to write boiler and pressure vessel insurance; or
 - (c) an owner-user inspection ~~agency as defined in Item (38) of this Rule~~, organization that is accredited by the National Board.
- (7) "Authorized inspector" means an employee of an Authorized Inspection Agency who is commissioned by the National Board and this State, holds an ~~appropriate~~ endorsement on his or her National Board ~~Commission~~, Commission appropriate for the work to be performed, and inspects as the third party inspector in ASME Code manufacturing facilities.
- (8) "Boiler," as defined in G.S. 95-69.9(b), includes the following types of boilers:

- 1 (a) "Exhibition boiler" means a historical or antique boiler that generates steam or hot water
2 for the purposes of entertaining or educating the public or is used for demonstrations,
3 tourist transportation, or exhibitions. This term includes boilers used in steam tractors,
4 threshers, steam powered sawmills, and similar ~~usages;~~ uses;
- 5 (b) "High pressure boiler" means a boiler in which steam or other vapor is generated at a
6 pressure of more than 15 ~~psig;~~ psig or water is heated to a temperature greater than 250°F
7 and a pressure greater than 160 psig for use external to itself. High pressure boilers include
8 the following:
- 9 (i) Electric boilers;
10 (ii) Miniature boilers;
11 (iii) High temperature water boilers; and
12 (iv) High temperature liquid boilers (other than ~~water;~~ water);
- 13 (c) "Low pressure boiler" means a boiler in which steam or other vapor is generated at a
14 pressure of not more than 15 ~~psig;~~ psig or water is heated to a temperature not greater than
15 250°F and a pressure not greater than 160 psig, including the following:
- 16 (i) "Hot water heating boiler" means a low pressure boiler that supplies heated water
17 that is returned to the boiler from a piping system and is used normally for
18 building heat applications (hydronic boiler);
- 19 (ii) "Hot water supply boiler" means a low pressure boiler that furnishes hot water to
20 be used externally to ~~itself (domestic water boiler);~~ itself; and
- 21 (iii) "Steam heating boiler" means a low pressure boiler that generates steam to be
22 used normally for building heat ~~applications;~~ applications;
- 23 (d) "Model hobby boiler" means a boiler that generates steam, whether stationary or mobile,
24 and is used for the purpose of entertainment or exhibiting steam technology, where the
25 boiler does not ~~exceed~~ exceed:
- 26 (i) 20 square feet of heating surface; ~~surface;~~
27 (ii) a shell diameter of 16 ~~inches;~~ inches;
28 (iii) a volume of 5 cubic ~~feet;~~ feet; and
29 (iv) and a pressure of not exceeding 150 psig ~~psig;~~ and
30 ~~(v) is used for the purpose of entertainment or exhibiting steam technology; and~~
- 31 (e) "Water heater" means a closed vessel in which water is heated by the combustion of fuel,
32 by electricity, or by any other source and withdrawn for potable use external to the system
33 at pressures not exceeding 160 psig and temperatures not exceeding 210°F.
- 34 (9) "Boiler blowoff" means the system associated with the rapid draining of boiler water to remove
35 concentrated solids that have accumulated as a ~~natural~~ result of steam generation. This term also
36 applies to the blowoff for other boiler appurtenances, such as the low-water fuel cutoff.

- (10) "Boiler proper" or "pressure vessel" means the internal mechanism, shell, and heads of a boiler or pressure vessel terminating at:
- (a) the first circumferential joint for welded end connections;
 - (b) the face of the first flange in bolted flange connections; or
 - (c) the first threaded joint in threaded connections.
- (11) "Bureau" means the Boiler Safety Bureau of the North Carolina Department of Labor.
- (12) "Certificate inspection" means an inspection, the report of which is used by the Chief Inspector as justification for issuing, withholding, or revoking the inspection certificate. The term "certificate inspection" also applies to the external inspection conducted in accordance with this Chapter whether or not a certificate is intended to be issued as a result of the inspection.
- (13) "Condemned boiler or pressure vessel" means a boiler or pressure vessel:
- (a) that has been found not to comply with G.S. Chapter 95, Article 7A, or this Chapter;
 - (b) that constitutes a menace to public safety; and
 - (c) that cannot be repaired or altered so as to comply with G.S. Chapter 95, Article 7A, and this Chapter.
- (14) "Coil type watertube boiler" means a boiler having no steam space, such as a steam drum, whereby the heat transfer portion of the ~~water-containing~~ water-containing space consists only of a coil of pipe or tubing.
- (15) "Commissioned inspector" means an employee of an Authorized Inspection Agency ~~that~~ who is commissioned by the National Board and ~~the State of North Carolina and~~ this State, holds an appropriate endorsement on his or her National Board Commission when required appropriate for the work to be performed, and who is charged with conducting in-service inspections of pressure equipment and inspecting repairs or alterations to that equipment.
- (16) "Defect" means any deterioration to the pressure equipment affecting the integrity of the pressure boundary or its supports. Defects may be cracks, corrosion, erosion, bags, bulges, blisters, leaks, broken parts integral to the pressure boundary such as stays, or other flaws identified by NDE or visual inspection.
- (17) "Deficiency" means any violation of the Uniform Boiler and Pressure Vessel ~~Act~~ Act, ~~or rules of~~ this ~~Chapter~~ Chapter, or identified defects.
- (18) "Design criteria" means ~~accepted~~ design and construction code requirements relating to the mode of design and construction of a boiler or pressure vessel.
- (19) "External inspection" means an inspection of the external surfaces and appurtenances of a boiler or pressure vessel. An external inspection may entail ~~the~~ "shutting down" ~~of~~ a boiler or pressure vessel while it is in operation, including inspection of internal surfaces, if the inspector determines this action is warranted.
- (20) "Hydropneumatic storage tank" means a pressure vessel used for storage of water at ambient temperature not to exceed 120°F and where a cushion of air is contained within the vessel.

- (21) "Imminent danger" means any condition or practice in any location that a boiler or pressure vessel is being operated such that a danger ~~exists, and exists~~ that could ~~reasonably~~ be expected to cause death or serious physical harm ~~immediately~~ if the condition is not abated.
- (22) "Insurance inspector" means the special inspector employed by an insurance company, and holding a valid North Carolina Commission and National Board Commission.
- (23) "Internal inspection" means as complete an examination as can ~~reasonably~~ be made of the internal and external surfaces and appurtenances of a boiler or pressure vessel while it is shut down.
- (24) "Maximum allowable working ~~pressure pressure~~" or ~~(MAWP)~~ "MAWP" means the maximum gauge pressure as determined by employing the stress values, design rules, and dimensions designated by the accepted design and construction code or as determined by the Chief Inspector in accordance with this Chapter.
- (25) "Menace to public safety" means a boiler or pressure vessel that cannot be operated without a risk of injury to persons and property.
- (26) "Miniature boiler" means a boiler that does not exceed any of the following:
- (a) 16 inch inside shell diameter;
 - (b) 20 square feet of heating surface (does not apply to electrically fired boilers);
 - (c) 5 cubic feet volume; and
 - (d) 100 psig maximum allowable working pressure.
- (27) "National Board Commission" means the commission issued by the National Board to those individuals who have passed the National Board commissioning examination and have fulfilled the requirements of the National Board Rules for Commissioned Inspectors.
- (28) "National Board Inspection ~~Code Code~~" or ~~(NBIC)~~ "NBIC" means the ANSI/NB-23 standard published by the National Board, as incorporated by reference under Rule .0103 of this chapter.
- (29) "Nondestructive ~~examination examination~~" or ~~(NDE)~~ "NDE" means examination methods used to verify the integrity of materials and welds in a component without damaging its structure or altering its mechanical properties. NDE may involve surface, subsurface, and volumetric examination. Visual inspection, x-rays, and ultrasound are examples of NDE.
- (30) "Nonstandard boiler or pressure vessels" means:
- (a) high pressure boilers contracted for or installed before December 7, 1935;
 - (b) heating boilers contracted for or installed before January 1, 1951;
 - (c) pressure vessels contracted for or installed before January 1, 1976;
 - (d) hydropneumatic storage tanks contracted for or installed before January 1, 1986; and
 - (e) boilers or pressure vessels ~~for to~~ which the ASME Code is not intended to apply, other than those boilers and pressure vessels to which the term North Carolina Special applies.
- (31) "Normal working hours" means between the hours of 6:00 AM and 6:00 PM, Monday through Friday, except for ~~state State~~ recognized holidays established in 25 NCAC 01E .0901.

- (32) "North Carolina Commission" means the commission issued by the ~~Board, Commissioner~~ Commissioner to those individuals who have passed the examination administered by the Chief Inspector relating to the Uniform Boiler and Pressure Vessel Act and the rules of this Chapter, and who also hold ~~to holders~~ of a National Board Commission, authorizing them to conduct inspections in this State.
- (33) "North Carolina Special" means a boiler or pressure vessel that is not constructed ~~under in~~ in compliance with the ~~accepted design and construction code~~ Accepted Design and Construction Code as defined in Item (1) of this Rule and for which the owner or operator shall apply for a special inspection certificate with the Chief Inspector.
- (34) "NPS" means nominal pipe size.
- (35) "Nuclear component" means the items in a nuclear power plant such as pressure vessels, piping systems, pumps, valves, and component supports.
- (36) "Nuclear system" means a system comprised of nuclear components ~~which collectively that~~ that serve the purpose of producing and controlling an output of thermal energy from nuclear fuel and includes those associated systems essential to the function and overall safety of the power system.
- (37) "Operating pressure" means the pressure at which a boiler or pressure vessel operates. It shall not exceed the MAWP except as shown in Section I of the ASME Code for ~~forced flow~~ forced-flow steam generators.
- (38) "Owner or user" means any person or legal entity responsible for the operation of any boiler or pressure vessel installed in this State. This term also applies to a contractor, installer, or agent of the owner or ~~user, user, as applicable.~~ user.
- (39) "Owner-user inspector" means an individual who holds a valid North Carolina Commission and National Board Commission and is employed by a company operating pressure vessels for its own use and not for ~~resale, resale~~ and maintains maintaining an inspection program that meets the requirements of the National Board for periodic inspection of pressure vessels owned or used by that company.
- (40) "Pressure piping" means piping, including welded piping, external to high pressure boilers from the boiler proper to the required valve(s).
- (41) "Pressure relief devices" mean the devices on boilers and pressure vessels set to open and relieve the pressure in the event of an ~~over-pressurization~~ over-pressurization event, and include the following:
- (a) "Non-reclosing pressure relief device" means a pressure relief device designed to remain open after ~~operation and includes a rupture disk that is a non-reclosing pressure relief device actuated by static pressure upstream of the device and designed to function by the bursting of a pressure retaining disk;~~ operation; and
- (b) "Pressure relief valve" means a pressure relief device that is designed to reclose and prevent the further flow of fluid after normal conditions have been restored. These devices include:

- (i) "Relief valve" means an automatic pressure relief valve that is actuated by static pressure upstream of the valve that opens further with the increase in pressure over the opening pressure;
- (ii) "Safety relief valve" means an automatic pressure relief valve that is actuated by static pressure upstream of the valve and characterized by full opening pop action or by opening in proportion to the increase in pressure over the opening pressure; and
- (iii) "Safety valve" means an automatic pressure relief valve that is actuated by static pressure upstream of the valve and characterized by full opening pop action.
- (42) "PSIG" means pounds per square inch gauge.
- (43) "Reinspection or Follow-Up Inspection" means ~~as complete~~ an examination ~~as is necessary~~ to verify that any repair or corrective action required as a result of a certificate inspection is completed.
- (44) "Service vehicle" means a vehicle mounted with an air storage tank ~~and often with other storage tanks that have oil, grease, or other fluids. The purpose of the vehicle is to service~~ that services vehicles and equipment in the field away from the owner's shop.
- (45) "Shop inspection" means an inspection conducted by an Authorized Inspector or a Commissioned Inspector pursuant to an inspection service agreement whereby the fabrication process or the repair or alteration of a boiler or pressure vessel is observed to ensure compliance with the ASME Code and the ~~NBIC. The term shop inspection includes~~ NBIC, including nuclear shop inspection where fabrication or material supply is done by the holder of an ASME ~~N~~ "N" type certificate.
- (46) "Special inspection" means any inspection conducted by a Deputy Inspector other than a regularly scheduled ~~inspection. Special inspection also includes~~ inspection, including the performance of an inspection by a Deputy Inspector that requires that the inspector make a special trip to meet the needs of the individual or organization requesting the inspection, ~~including~~ conducting certificate inspections during hours other than normal working hours, and inspection of field repairs and alterations.
- (47) "Special inspector" means a National Board commissioned inspector employed by an insurance company authorized to write boiler and pressure vessel insurance in the state State of North Carolina.
- (48) "Violation" means the failure to comply with the requirements of the Uniform Boiler and Pressure Vessel Act or this Chapter.

*History Note: Authority G.S. 95-69.11; 95-69.14;
Eff. May 29, 1981;
Temporary Amendment [(16)]; Eff. March 10, 1982, for a Period of 120 Days to Expire on July 8, 1982;*

1 *Amended Eff. March 1, 2017; Amended Eff. March 1, 2015; July 1, 2011; January 1, 2009; July 1,*
2 *2006; January 1, 1995; January 1, 1987; January 1, 1986; June 1, 1982.*
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1 13 NCAC 13 .0203 is amended with changes as published in 31:09 NCR 805-810 as follows:

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3 **13 NCAC 13 .0203 NORTH CAROLINA COMMISSION**

4 (a) When requested by the employer and upon presentation of a ~~properly~~ completed Application for Commission as
5 an Inspector of Boilers and Pressure Vessels, a North Carolina Commission, bearing the signature of the
6 Commissioner, shall be issued by the ~~Board of Boiler and Pressure Vessel Rules (the "Board")~~ Commissioner to
7 persons holding a valid National Board Commission who have taken and passed the examination specified in 13
8 NCAC 13 .0202(b).

9 (b) Applications for a North Carolina Commission shall be processed upon proof of a National Board Commission
10 and payment of a thirty-five dollar (\$35.00) fee to the Department of Labor.

11 (c) North Carolina Commissions ~~are~~ shall be valid through December 31, at which time the inspector's employer shall
12 submit a renewal request letter and a thirty-five dollar (\$35.00) fee to the Department of Labor.

13 (d) The North Carolina Commission shall be returned by the employing company with notification of termination
14 date to the Bureau within 30 days of termination of employment.

15 (e) A North Carolina Commission may be suspended or revoked by the ~~Board~~ Commissioner in accordance with ~~G.S.~~
16 ~~95-69.13 G.S. 95-69.11(20) for incompetence, untrustworthiness, or falsification of~~ if an inspector is incompetent or
17 untrustworthy or has falsified any statement in an application or inspection report. The ~~Board~~ Commissioner shall
18 give notice of the commencement of proceedings for suspension or revocation of a commission pursuant to G.S. 150B-
19 23. A North Carolina Commission may be suspended prior to the hearing if the Chief Inspector determines that the
20 public health, safety, or welfare requires the suspension. In this case, the proceedings shall be promptly commenced
21 and determined in accordance with G.S. 150B-3. The ~~Board's~~ Commissioner's decision regarding the competency of
22 an inspector shall be determined after consideration of the knowledge, skill, and care ~~ordinarily~~ possessed and
23 employed by boiler and pressure vessel inspection personnel in good standing. Industry custom and practice shall be
24 considered but are not determinative. Failure to conduct the inspections in accordance with this Chapter shall
25 constitute incompetence. The ~~Board~~ Commissioner shall give the inspector opportunity to show that he or she is
26 conducting his or her duties in a competent manner and that suspension or revocation is unwarranted. If the inspector
27 believes that the decision of the ~~Board~~ Commissioner is not warranted, ~~he may file a petition for judicial review~~
28 pursuant to Article 4 of Chapter 150B of the N.C. General Statutes. the inspector can may take exception to the
29 determination, in which event the inspector may appeal the final determination of the action pursuant to G.S. 150B.

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31 *History Note: Authority G.S. 95-69.11; 95-69.15;*

32 *Eff. May 29, 1981;*

33 *Amended Eff. March 1, 2017; March 1, 2015; July 1, 2011; January 1, 2009; July 1, 2006; January*
34 *1, 1995; March 2, 1992; September 1, 1986.*

1 13 NCAC 13 .0205 is amended with changes as published in 31:09 NCR 805-810 as follows:

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3 **13 NCAC 13 .0205 OWNER-USER INSPECTION ~~AGENCY~~ ORGANIZATION**

4 (a) A company seeking to conduct inspections of its own pressure vessels shall file an application with the Chief
5 ~~Inspector~~ Inspector, ~~and obtain approval from the Board~~, accompanied by the Certificate of Accreditation issued by
6 the National Board as an Owner-User Inspection Organization.

7 (b) The company shall, in its application, designate a supervisor who shall be an engineer within its ~~employ~~, employ
8 who, upon approval of the application, shall:

- 9 (1) ascertain that the company's inspectors, pursuant to Rules .0202 and .0203 of this Section, are issued
10 ~~owner-user commission~~ National Board Commission cards;
- 11 (2) supervise inspections of pressure vessels and ~~see~~ ensure that an inspection report, signed by the
12 owner-user inspector, is filed at the equipment site;
- 13 (3) notify the Chief Inspector of any unsafe pressure vessel that presents a condition of imminent
14 danger;
- 15 (4) maintain a master file of inspection records that shall be ~~made~~ available for examination by the
16 Chief Inspector or his representative during business ~~hours~~; hours and contain the following:
- 17 (A) identifying each pressure vessel by serial number and abbreviated description; and
18 (B) showing the date of the last and next scheduled inspection; and
- 19 (5) on a date mutually agreed upon with the Chief Inspector, file an annual statement signed by the
20 ~~supervisor~~, supervisor showing the number of boilers and certifying that each inspection was
21 conducted pursuant to this Chapter, accompanied by an administrative fee of twenty-five dollars
22 (\$25.00) per vessel.

23 (c) Inspection certificates shall not be required for pressure vessels inspected under an owner-user program.

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25 *History Note: Authority G.S. 95-69.11; 95-69.15; 95-69.16;*

26 *Eff. May 29, 1981;*

27 *Amended Eff. March 1, 2017; March 1, 2015; January 1, 2009; July 1, 2006; January 1, 1995;*
28 *March 2, 1992; September 1, 1986.*