
Rules of
Department of Public Safety
Division 40—Division of Fire Safety
Chapter 2—Boiler and Pressure Vessel Safety Rules

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**Title 11—DEPARTMENT OF
PUBLIC SAFETY**

**Division 40—Division of Fire Safety
Chapter 2—Boiler and Pressure Vessel
Safety Rules**

11 CSR 40-2.010 Definitions

PURPOSE: This rule formulates definitions concerning boilers and pressure vessels in Missouri.

Editor's Note: The following material is incorporated into this rule by reference:

1) *American Society of Mechanical Engineers Code (ASME Code) (New York City: American Society of Mechanical Engineers, 1995).*

In accordance with section 536.031(4), RSMo, the full text of material incorporated by reference will be made available to any interested person at the Office of the Secretary of State and the headquarters of the adopting state agency.

(1) Act—The Boiler and Pressure Vessel Safety Act which was enacted as sections 650.200—650.290, RSMo.

(2) *ASME Code—The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code* as made, approved and adopted by the Council of the Society and approved and adopted by the board. Copies of the code may be obtained from the society at 345 E. 47th Street, New York, NY 10017.

(3) Alteration—A change in any item described on the original Manufacturers' Data Report which affects the pressure 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.

(4) *API-ASME Code—The American Petroleum Institute (API) in conjunction with the ASME Code as used in these rules shall mean the Code for Unfired Pressure Vessels for Petroleum Liquids and Gases.*

(5) Approved—Approved by the Board of Boiler and Pressure Vessel Rules.

(6) Authorized inspection agency—One (1) of the following:

(A) A department, division, or unit, established by a jurisdiction which has adopted and does administer one (1) or more sections of the *ASME Code* as a legal requirement and whose inspectors hold valid commissions issued by the National Board of Boiler and Pressure Vessel Inspectors (NB); and

(B) An insurance company which has been licensed or registered by the appropriate authority of the state of Missouri to write and does write boiler and pressure vessel insurance and provides inspection service of boilers and pressure vessels in the state.

(7) Board—The Board of Boiler and Pressure Vessel Rules created by the Act and empowered to make, alter, amend and interpret rules for the safe construction, installation, inspection, alteration and repair of boilers and pressure vessels.

(8) Boiler—A pressurized vessel in which water is heated, steam is generated, steam is superheated, or any combination of these, under pressure or vacuum by the direct application of heat. The term boiler includes fired units for heating or vaporizing liquids other than water where these units are separate from processing systems and complete within themselves.

(A) Power boiler—A boiler in which steam or other vapor is generated at a pressure of more than fifteen pounds per square inch (15 psi).

(B) High temperature water boiler—A water boiler intended for operation at pressures in excess of one hundred sixty (160) psi and/or temperatures in excess of two hundred fifty degrees Fahrenheit (250°F).

(C) Heating boiler—A steam or vapor boiler operating at pressures not exceeding fifteen (15) psi or a hot water boiler operating at pressures not exceeding one hundred sixty (160) psi or temperatures not exceeding two hundred fifty degrees Fahrenheit (250°F).

(D) Electric boiler—A power boiler or heating boiler in which the source of heat is electricity.

(E) Miniature boiler—A power boiler or high temperature water boiler which does not exceed the following limits:

1. Sixteen inches (16") inside diameter of shell;

2. Twenty (20) square feet heating surface (not applicable to electric boilers);

3. Five (5) cubic feet gross volume exclusive of casing and insulation; and

4. One hundred (100) psi maximum allowable working pressure.

(F) Unfired steam boiler—An unfired pressure vessel or system of unfired pressure vessels intended for operation at a pressure in

excess of fifteen (15) psi steam for the purpose of producing and controlling an output of thermal energy.

(G) Waste heat boiler—An unfired pressure vessel or system of unfired pressure vessels intended for operation in excess of fifteen (15) psi steam for the purpose of producing and controlling an output of thermal energy.

(H) Heat recovery boiler—A vessel or system of vessels comprised of one (1) or more heat exchanger surfaces used for the recovery of waste heat.

(I) Steam heating boiler—A steam boiler for operation at pressures not exceeding fifteen (15) psi.

(J) Hot water heating boiler—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 one hundred sixty (160) psi and/or a temperature of two hundred fifty degrees Fahrenheit (250°F) at or near the boiler outlet.

(K) Hot water supply boiler—A boiler completely filled with water that furnishes hot water to be used externally to itself at pressures not exceeding one hundred sixty (160) psi or at temperatures not exceeding two hundred fifty degrees Fahrenheit (250°F) at or near the boiler outlet.

(L) Portable boiler—A boiler which is primarily intended for temporary location and the construction and usage permits it to be readily moved from one location to another.

(M) Jacketed steam kettle/cooker—A gas or electrically fired kettle or cooker with jacket(s), operating at pressures not exceeding fifty (50) psi.

(9) Certificate of competency—A certificate issued to a person who has passed the examination and met the experience requirements, prescribed by the board.

(10) Certificate of inspection—A certificate issued by the chief inspector for the operation of a boiler or pressure vessel as required by the Act. The certificate of inspection shall be posted, under glass, at or near the object.

(11) Certificate inspection—An inspection, the report of which is used by the chief inspector as justification for issuing, withholding or revoking the inspection certificate. This certificate inspection shall be an internal inspection when required; otherwise, it shall be as complete an inspection as possible.

(A) Internal inspection—As complete an examination as can reasonably be made of the internal, including water side, and external surfaces of a boiler or pressure vessel while it is shut down and manhole plates, handhold

plates or other inspection opening closures are removed as required by the inspector.

(B) External inspection—An inspection made when a boiler or pressure vessel is in operation, if possible. An external inspection should include verification that required safety devices are operable, in good working order, and tested periodically.

(12) Commission National Board—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 inspections or field inspections in accordance with the NB bylaws and whose employer submits the inspector's application to the NB for the commission.

(13) Condemned boiler or pressure vessel—A boiler or pressure vessel that has been inspected and declared unsafe, or disqualified by legal requirements, by an inspector and a stamping or marking designating its condemnation has been applied by the chief or deputy boiler and pressure vessel inspector.

(14) Director—The director of the inspection section of the Department of Public Safety.

(15) Existing installation—Includes any boiler or pressure vessel constructed, installed, placed in operation or contracted on or before November 12, 1986.

(16) Fittings and appliances—Include but are not limited to pressure relief devices, low water protection, pressure controls, temperature controls, thermometers, gages, expansion tanks, pipe fittings, pipe valves, pipe, etc., within the scope of these rules and the Act.

(17) Inspector—The chief inspector, any deputy inspector, special inspector or owner-user inspector.

(A) Chief inspector—The chief boiler and pressure vessel inspector appointed under the Act.

(B) Deputy inspector—Any inspector appointed by the director under the provisions of the Act.

(C) Special inspector—An inspector holding a Missouri certificate of competency and who is regularly employed by an insurance company authorized to insure against loss from explosion of boilers or pressure vessels in this state.

(D) Owner-user inspector—An inspector who holds a valid National Board Owner-User Commission, who has passed the examination prescribed by the board and who is continuously employed as an inspector by an

owner-user inspection agency recognized by the state of Missouri.

(18) Jurisdiction—A state, province, or territory of the United States, Canada, or Mexico or any city of the United States having a population of one (1) million or more that has adopted and does administer one (1) or more sections of the *ASME Boiler and Pressure Vessel Code* as a legal requirement, one (1) of which is Section I, and maintains a duly constituted department, bureau, division, or unit for the purpose of enforcement of the Code.

(19) Lined potable water heater—A water heater with a corrosion resistant lining used to supply potable hot water.

(20) National Board—The National Board of Boiler and Pressure Vessel Inspectors (NB), 1055 Crupper Avenue, Columbus, Ohio 43229, whose membership is composed of the chief inspectors of jurisdictions who are charged with the enforcement of the provisions of the *ASME Code*.

(21) *National Board Inspection Code*—The manual for boiler and pressure vessel inspectors published by the NB from which copies may be obtained.

(22) Nuclear power plant—One (1) or more nuclear power systems and containment systems.

(23) Nuclear power systems—A system which serves the purpose of producing and controlling an output of thermal energy from nuclear fuel and those associated systems essential to the functions of the power system. The components of the system include items such as pressure vessels, piping systems, pumps, valves and storage tanks.

(24) New boiler or pressure vessel installation—Includes all boilers or pressure vessels constructed, installed, placed in operation or contracted for after November 12, 1986.

(25) Nonstandard boiler or pressure vessel—A boiler or pressure vessel that does not bear the ASME stamp, the API-ASME stamp or the stamp of any jurisdiction which has adopted a standard of construction equivalent to that required by the board.

(26) Owner or user—Any person, firm or corporation legally responsible for the safe installation, operation and maintenance of any boiler or pressure vessel within the state of Missouri.

(27) Owner-user inspection agency—An owner or user of pressure vessels who maintains a regularly established inspection department, whose organization and inspection procedures meet the requirements of the National Board rules and are acceptable to the board.

(28) Pressure vessel—A vessel or an unfired steam boiler, as defined in subsection (8)(F); in which the pressure is obtained from an external source, by the application of heat from an indirect source or from a direct source other than those boilers defined in subsections (8)(A)—(M).

(29) Psi—Pounds per square inch.

(30) Reinstalled boiler or pressure vessel—A boiler or pressure vessel removed from its original setting and reinstalled at the same location or at a new location without change of ownership.

(31) Repair—The work necessary to restore a boiler or pressure vessel to a safe and satisfactory operating condition, provided there is no deviation from the original design.

(32) Second-hand boiler or pressure vessel—A boiler or pressure vessel which has changed both location and ownership since primary use.

(33) Standard boiler or pressure vessel—A boiler or pressure vessel which bears the stamp of this state, the ASME stamp, the API-ASME stamp, both the ASME and NB stamp or the stamp of another jurisdiction which has adopted a standard of construction equivalent to that required by the board.

(34) Water heater—A closed vessel in which water is heated by the combustion of fuels, electricity or any other source and withdrawn for use external to the system at pressures not exceeding one hundred sixty (160) psi and shall include all controls and devices necessary to prevent water temperatures from exceeding two hundred ten degrees Fahrenheit (210°F).

*AUTHORITY: section 650.215, RSMo (1994). * Original rule filed May 12, 1986, effective Oct. 27, 1986. Amended: Filed Oct. 3, 1995, effective April 30, 1996.*

**Original authority 1984, amended 1990, 1993, 1995.*



11 CSR 40-2.020 Administration

PURPOSE: This rule addresses the safe construction, installation, inspection, operation, maintenance and repair of boilers and pressure vessels in Missouri.

Editor's Note: The following material is incorporated into this rule by reference:

- 1) *American Society of Mechanical Engineers Code (ASME Code) (New York City: American Society of Mechanical Engineers, 1995);*
- 2) *National Board Inspection Code (Columbus, Ohio: National Board Inspection Code, 1995);*
- 3) *API-510 (Washington, D.C.: American Petroleum Institute).*

In accordance with section 536.031(4), RSMo, the full text of material incorporated by reference will be made available to any interested person at the Office of the Secretary of State and the headquarters of the adopting state agency.

(1) Minimum Construction Standards for Boilers and Pressure Vessels.

(A) All new boilers, pressure vessels, water heaters and storage tanks, unless otherwise exempt, to be operated in this jurisdiction, shall be designed, constructed, inspected, stamped and installed in accordance with the *American Society of Mechanical Engineers (ASME) Code* and these regulations. Boilers and pressure vessels for which an ASME Manufacturer's Data Report is required shall bear the manufacturer's National Board (NB) number as registered with the National Board. A copy of the Manufacturer's Data Report, signed by the manufacturer's representative and the NB-commissioned inspector, shall be filed with the chief inspector through the National Board.

(B) State Special. If a boiler or pressure vessel cannot bear the ASME and NB stamping or is to be constructed to another code approved by the board, details in the English language and United States customary units of the proposed construction material specifications and calculations shall be submitted to the chief inspector by the owner or user and approval as State Special obtained from the board before construction is started. Copies of all applicable codes and referenced standards shall be made available, as requested, by the board.

(C) Before a second-hand boiler or pressure vessel is installed, application for permission to install it shall be filed by the

owner or user with the chief inspector and the chief inspector's approval obtained.

(D) The following shall be exempt from the *ASME Code* construction requirements of subsection (1)(A):

1. Water heaters where none of the following limitations are exceeded:

A. Heat input of two hundred thousand (200,000) British thermal units (BTU/hr) (57.1kw);

B. Water temperature of two hundred ten degrees Fahrenheit (210°F); and

C. Nominal water capacity of one hundred twenty gallons (120 g) and which are provided with one (1) or more safety relief valves meeting the requirements of 11 CSR 40-2.040(6); and

2. Coil-type hot water boilers used only for steam vapor cleaning of things such as machinery, equipment and building when none of the following limitations are exceeded:

A. One inch (1") diameter tubing or three-fourths inch (3/4") nominal pipe size with no steam drums or headers attached;

B. Nominal water containing capacity does not exceed six (6) gallons;

C. Water temperature does not exceed three hundred fifty degrees Fahrenheit (350°F);

D. Steam is not generated within the coil; and

E. One (1) or more safety relief valves meeting the requirements of 11 CSR 40-2.030(6) must be installed and adequate controls are provided.

(E) In any circumstances other than those previously mentioned, the owner or user shall contact the chief inspector.

(2) Frequency of Inspections of Boilers and Pressure Vessels.

(A) Power boilers; high pressure, high temperature water boilers; and waste heat boilers shall receive a certificate inspection annually which shall be an internal inspection where construction permits; otherwise it shall be as complete an inspection as possible. Boilers shall also be annually inspected externally while under normal operating conditions.

(B) Unfired steam boilers shall receive a certificate inspection every year. The inspection shall be an external inspection and an internal inspection, where construction permits.

(C) Waste heat boilers shall receive a certificate inspection every year. The inspection shall be an internal inspection. Boilers shall also be annually inspected externally while under normal operating conditions.

(D) Low pressure boilers, hot water heaters and hot water storage tanks shall receive a certificate inspection every two (2) years.

1. Steam or vapor boilers have an external inspection and an internal inspection every two (2) years, where construction permits.

2. Hot water heating and hot water supply boilers shall have an external inspection every two (2) years and, where construction permits, an internal inspection at the discretion of the inspector.

3. Water heaters including hot water storage tanks shall have an external inspection every two (2) years and shall include the function of all controls and devices.

(E) Except as provided for in subsections (2)(F) and (G), pressure vessels subject to internal corrosion shall receive a certificate inspection every two (2) years. This inspection shall be internal, where construction permits and where preparation of the vessel for internal inspection does not present a hazard due to the materials involved. Pressure vessels not subject to internal corrosion shall be inspected externally every two (2) years.

(F) Pressure vessels that are under the supervision of an owner-user inspection agency shall be inspected at the same interval unless otherwise agreed upon by the board with the agency.

(G) Nuclear power plants, that are included in the Act, shall be inspected as provided by Section XI of the *ASME Code*.

(H) Based upon documentation of actual service conditions by the owner or user of the operating equipment, the board, in its discretion, may permit variations in the inspection frequency requirements as provided in the Act.

(3) Notification of Inspection. Certificate inspection, as required in section (2), shall be carried out prior to the expiration date of the certificate at a time mutually agreeable to the inspector and owner or user. External inspections may be performed by the inspector during reasonable hours and without prior notification. When, as a result of external inspection or determination by other objective means, it is the inspector's opinion that continued operation of the boiler or pressure vessel constitutes a menace to public safety, the inspector may request an internal inspection or an appropriate pressure test or both to evaluate conditions. In these instances the owner or user shall prepare the boiler or pressure vessel for the inspections or tests as the inspector designates.

(4) Examination for an Inspector's Certificate of Competency.

(A) Examination for an inspector's certificate of competency shall be held at the office of the board or at any other location to be selected by the board, four (4) times each year, namely the first Wednesday and one-half (1/2) day Thursday in the months of March, June, September and December. An applicant for an examination shall have education and experience equal to at least one (1) of the following:

1. A degree in mechanical engineering plus one (1) year of experience in design, construction, operation or inspection of high pressure boilers and pressure vessels;

2. A degree in a branch of engineering, other than mechanical engineering or an associate degree in mechanical technology plus two (2) years of experience in design, construction, operation or inspection of high pressure vessels; or

3. The equivalent of a high school education plus three (3) years of experience—

A. In high pressure boiler and pressure vessel construction or repair;

B. As an operating engineer in charge of high pressure boiler operation; or

C. As an inspector of high pressure boilers and pressure vessels.

(B) Applications for examination shall be in writing on a form to be furnished by the chief inspector stating the education of the applicant, a list of the applicants' employers, the applicant's period of employment and position held with each employer. Applications containing willful falsifications or untruthful statements shall be cause for rejection. Applications shall be submitted to the chief inspector at least forty-five (45) days prior to the date of examination. If the applicant's education and experience are acceptable to the board, the applicant shall be given a written examination dealing with the construction, maintenance and repair of boilers and pressure vessels and their appurtenances and the applicant shall be accepted or rejected on the merits of this examination. If the applicant is successful in meeting the requirements of the board, a certificate of competency will be issued by the chief inspector when the applicant is employed on a full-time basis by an authorized inspection agency as defined in 11 CSR 40-2.010(6) and (26). Upon the expiration of ninety (90) days, an applicant who failed to pass the examination will be permitted to take another written examination and the applicants' acceptance or rejection will be determined by the board on the basis of this examination.

(5) Examination Fees. A fee as required in section (14) will be charged for each applicant (for each examination) taking the examination for a certificate of competency.

(6) Certificate of Competency and Identification Card.

(A) Upon the request of the applicant's employer, a certificate of competency and an identification card may be issued by the chief inspector to the following:

1. An inspector who is employed by the jurisdiction;

2. An inspector who is employed full-time by an insurance company which is authorized to insure and does insure against loss from explosions of boilers and pressure vessels in the jurisdiction;

3. An inspector employed as described in either paragraph (6)(A)1. or 2. who conducts shop or field inspections of new boilers, pressure vessels or nuclear components in accordance with the applicable *ASME Code* requirements; or

4. An inspector who is continuously employed by a company which operates pressure vessels in this state and has a valid owner-user inspection agency agreement as provided for in section (11), provided that the applicant has satisfactorily passed the examination as set forth in section (4) or holds a valid commission or certificate of competency from a state that has a standard of examination substantially equal to that of this jurisdiction and a valid commission and a current commission card issued by the National Board.

(B) The request for the certificate of competency and identification card shall be completed on forms to be provided by the chief inspector and shall be accompanied by, when applicable, a facsimile of the applicants' commission and commission card, certificate of competency and identification card as mentioned previously and a fee as required in section (14).

(C) The certificate of competency and valid identification card shall be returned to the chief inspector when the inspector, to whom they were issued, is no longer employed by the organization employing the inspector at the time that the certificate was issued.

(D) Each person holding a valid certificate of competency and who conducts inspections as provided by the Act shall apply to the chief inspector on forms provided and obtain a renewal identification card annually. A fee as required in section (14) for each card shall accompany each application.

(E) An inspector's certificate of competency may be suspended by the chief inspector

after due investigation and recommendation by the board for neglect of duty, incompetency, untrustworthiness or conflict of interest of the holder of the certificate, or for willful falsification of any matter or statement contained in the inspector's application or in a report of any inspection made by the inspector. Written notice of any suspension shall be given, within not more than ten (10) days, by the chief inspector, to the inspector and the inspector's employer. Persons whose certificates of competency have been suspended shall be entitled to an appeal to the board as provided for in the Act and to be present in person and represented by counsel at the hearing of the appeal.

(7) Conflict of Interest. An inspector shall not engage in the sale of any services, article or device relating to boilers, pressure vessels or their appurtenances.

(8) Inspection Reports to Be Submitted by Inspectors.

(A) Inspectors, within one (1) year of the effective date of these rules (October 27, 1986) for boilers and three (3) years for pressure vessels, shall submit to the chief inspector an inspection report on forms acceptable to the board for each boiler and pressure vessel subject to inspection in this state. Forms NB-5, NB-6, NB-7 and the Missouri Boiler and Pressure Vessel-Report of Inspection are three (3) acceptable forms. Complete data shall be submitted on forms acceptable to the board for each nonstandard boiler or pressure vessel.

(B) Subsequent inspections by deputy and special inspectors of both standard and non-standard boilers and pressure vessels shall be reported on forms acceptable to the board.

(C) Inspection reports as required in subsections (8)(A) and (B) shall be submitted within thirty (30) days from the date of inspection.

(D) Owner-user inspection agencies shall report in accordance with subsections (8)(B) and (C), or upon forms acceptable to the board, which shall be filed as provided in section (11).

(9) Insurance Companies to Notify Chief Inspector of New, Cancelled or Suspended Insurance on Boilers or Pressure Vessels. All insurance companies shall notify the chief inspector, within thirty (30) days, of all boilers or pressure vessels on which insurance is written, cancelled, not renewed or suspended because of unsafe conditions.

(10) Special Inspectors to Notify Chief of Unsafe Boilers and Pressure Vessels. If a special inspector, upon first inspection of a new

risk, finds that a boiler or pressure vessel, or any appurtenance of the boiler or pressure vessel, is in a condition that the inspector's company would refuse insurance, the company immediately shall notify the chief inspector and submit a report on the defects. If upon inspection a special inspector finds a boiler or pressure vessel to be unsafe for further operation, the inspector shall promptly notify the owner or user, stating what repairs or other corrective measures are required to bring the object into compliance with these rules. Unless the owner or user makes repairs or adopts other corrective measures promptly, the special inspector immediately shall notify the chief inspector. Until the corrections have been made, no further operation of the boiler or pressure vessel involved shall be permitted. If an inspection certificate for the object is required and is in force, it shall be suspended by the chief inspector. When reinspection establishes that the necessary repairs have been made or corrective actions have been taken and the boiler or pressure vessel is safe to operate, the chief inspector shall be notified. At that time an inspection certificate, where applicable, will be issued.

(11) Owner-User Inspection Agency.

(A) Any person, firm, partnership or corporation operating pressure vessels in this jurisdiction may seek approval and registration as an owner-user inspection agency by filing an application with the chief inspector on prescribed forms and request approval by the board.

(B) Application and registration shall show the name of the agency and its principal address in this state and the name and address of the person(s) having supervision over inspections made by the agency. Changes in supervisory personnel shall be reported to the chief inspector within thirty (30) days after the change.

(C) Each owner-user inspection agency as required by the provisions of the Act and these regulations shall—

1. Conduct inspections of pressure vessels, not exempt by the Act, utilizing only qualified inspection personnel, as provided in section (6);

2. Retain on file at the location where the equipment is inspected, a true record or copy of each of the latest inspection reports signed by the inspector;

3. Execute and deliver to the chief inspector and those responsible for the operation of the pressure vessel, a true report of each inspection together with appropriate requirements or recommendations that result from the inspections;

4. Notify promptly the chief inspector of any pressure vessel which does not meet the requirements for safety;

5. Maintain inspection records which will include a list of each pressure vessel covered by the Act, showing a serial number and abbreviated descriptions as may be necessary for identification, the date of last inspection of each unit and approximate date for the next inspection, arrived at by applying the appropriate rules to all data available at the time the inspection record is compiled. Information regarding frequency and type of inspection is provided in section (2). The inspection record shall be readily available for examination by the chief inspector or his/her authorized representative during business hours; and

6. Submit to a periodic audit of the owner-user program and records, at least triennially. Fees will be in accordance with the rates established in subsection (14)(B).

(12) Defective Conditions Disclosed at Time of External Inspection. If, upon external inspection, there is evidence of a leak or crack, sufficient covering of the boiler or pressure vessel shall be removed to permit the inspector to satisfactorily determine the safety 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 examination made.

(13) Owner or User to Notify Chief Inspector of Accident. When an accident occurs to a boiler or pressure vessel, the owner or user promptly shall notify the chief inspector by submitting a detailed report of the accident. In the event of a personal injury or any explosion, notice shall be given immediately by telephone, telegraph or messenger, and neither the boiler or pressure vessel, nor any parts of the boiler or pressure vessel, shall be removed or disturbed before permission has been given by the chief inspector, except for the purpose of saving human life and limiting consequential damage.

(14) Inspection Certificate, Inspection and Miscellaneous Fees.

(A) If a boiler or pressure vessel after inspection, is found to be suitable and to conform to these regulations, the owner or user shall pay directly to the jurisdiction a fee of fifteen dollars (\$15) for each boiler and pressure vessel required to be inspected under the Act upon which an inspection certificate shall be issued. Checks and money orders for payment of all fees should be made payable to the Division of Fire Safety.

(B) Inspection Fees. The owner or user of a boiler or pressure vessel required by the Act to be inspected by the chief inspector, or deputy inspector, shall pay when invoiced by the chief inspector, fees in accordance with the following schedule:

1. Power boilers and high pressure, high temperature water boilers.

A. Certificate internal inspections.

(I) Boilers of fifty (50) square feet of heating surface or less \$26.

(II) Boilers over fifty (50) square feet of heating surface and less than two thousand (2000) square feet of heating surface \$47.

(III) Boilers of two thousand (2000) square feet of heating surface or more, and less than four thousand (4000) square feet of heating surface \$54.

(IV) Boilers of four thousand (4000) square feet of heating surface or more, and less than ten thousand (10,000) square feet of heating surface \$64.

(V) Boilers of ten thousand (10,000) square feet of heating surface or more \$80.

B. Certificate external inspections.

(I) Boilers of fifty (50) square feet of heating surface or less \$20.

(II) Boilers over fifty (50) square feet of heating surface \$29.

C. Not more than the equivalent of the internal and external inspection fees shall be charged or collected for any and all inspections, as listed in paragraph (14)(B)1., of any boiler in any one (1) year except as provided in paragraph (14)(B)6.;

2. Heating boilers.

A. Certificate inspections.

(I) Heating boilers external inspection \$22.

(II) Heating boilers internal inspection \$34.

(III) Hot water supply boilers, water heaters, jacketed kettles \$18.

(IV) Storage water heaters \$16.

B. Not more than one (1) fee shall be charged or collected for any and all inspections of any heating boiler or storage water heater, in any required inspection period except as provided in paragraph (14)(B)6.;

3. For boilers where the only source of heat is electrical energy, the fees of paragraphs (14)(B)1. and 2. shall apply based on one (1) kilowatt being equal to one (1) square foot of heating surface;

4. Pressure vessels.

A. Certificate inspections. Fees to be based on the maximum length of the vessel times the maximum width or diameter in feet.



(I) Each pressure vessel subject to inspection having a product as determined above fifty (50) square feet or less \$15.

(II) For each additional one hundred (100) square feet, or portions thereof, of area in excess of fifty (50) square feet \$9.

(III) Not more than forty-six dollars (\$46) shall be paid for each inspection on any one (1) vessel.

(IV) A group of pressure vessels, such as the rolls of a paper machine or dryer operating as a single machine or unit, shall be considered as one (1) pressure vessel.

(V) Not more than one (1) fee shall be charged or collected for any and all previously mentioned inspections of any pressure vessels in any required inspection period except as provided in paragraph (14)(B)6.;

5. Hydrostatic tests. When it is necessary to make a special trip to witness the application of a hydrostatic test, an additional fee based on the scale of fees applicable to a certificate inspection of the boiler or pressure vessel shall be charged; and

6. All other inspections, including shop inspections, special inspections and inspections of second-hand or used boilers or pressure vessels made by the chief or deputy inspector shall be charged for at the rate of not less than one hundred fifteen dollars (\$115) for one-half (1/2) day of four (4) hours or two hundred twelve dollars (\$212) for one (1) full day of eight (8) hours, including travel time, plus all expenses, including traveling, meals and lodging.

(C) Miscellaneous Fees.

1. Examination Fee for each examination \$21.

2. Commission Fee (including replacement or renewal) \$17.

3. Commission Renewal Fee \$13.

4. Annual filing fees for owner-user inspection agencies based on the number of vessels.

A. For statements covering not more than twenty-five (25) vessels (per vessel) \$2.

B. For statements covering more than twenty-five (25) but not more than one hundred (100) vessels \$50.

C. For statements covering more than one hundred (100) but not more than five hundred (500) vessels \$100.

D. For statements covering more than five hundred (500) vessels \$200.

(D) Disposition of Fees. The chief inspector shall account for and transfer all fees so received to the director of revenue.

(E) If the owner or user of a boiler or pressure vessel which is required to be inspected refuses to allow an inspection to be made or refuses to pay the fee stipulated, a new

inspection certificate shall not be issued. If a valid inspection certificate exists, it shall be suspended by the chief inspector until the owner or user complies with the requirements.

(F) The owner or user who causes a boiler or pressure vessel to be operated without a valid certificate shall be subject to the penalty as provided for in the Act. It is the owner's responsibility to assure a valid certificate of inspection is posted at the location of the object.

(15) Validity of Inspection Certificate. An inspection certificate, issued in accordance with section (14), shall be valid until expiration unless some defect or condition affecting the safety of the boiler or pressure vessel is disclosed provided, however, that a certificate issued for a boiler or pressure vessel inspected by a special inspector shall be valid only if the boiler or pressure vessel for which it was issued continues to be insured by a duly authorized insurance company.

(16) Restamping Boilers and Pressure Vessels. When the stamping on a boiler or pressure vessel becomes indistinct, the inspector shall instruct the owner or user to have it restamped. Request for permission to restamp the boiler or pressure vessel shall be made to the chief inspector and proof of the original stamping shall accompany the request. The chief inspector may grant the authorization. Restamping shall be in accordance with the *National Board Inspection Code*. Notice of completion of the restamping shall be filed with the chief inspector by the inspector who witnessed the stamping on the boiler or pressure vessel, together with a facsimile of the stamping applied.

(17) Penalty for Operation of Unsafe Boilers or Pressure Vessels.

(A) If, upon inspection, a boiler or pressure vessel is found to be in a condition that it is unsafe to operate, the inspector shall notify the chief inspector and the inspection certificate may be suspended by the chief inspector.

(B) Any person, firm, partnership or corporation causing the boiler or pressure vessel to continue to be operated shall be subject to the penalty provided in the Act.

(18) Condemned Boilers and Pressure Vessels.

(A) Any boiler or pressure vessel having been inspected and declared unfit for further service by an inspector shall be stamped by the chief inspector or a deputy inspector on either side of the state number with the letters XXX as shown by the following facsimile,

which will designate a condemned boiler or pressure vessel:

XXX MO XXX

This stamping shall be applied directly to the boiler or pressure vessel, whenever possible.

(B) Any person, firm, partnership or corporation using, or offering for sale, a condemned boiler or pressure vessel for operation within this state shall be subject to the penalties provided by the Act.

(19) Reinstallation of Boilers or Pressure Vessels. When a standard boiler or pressure vessel located in this jurisdiction is to be moved outside the jurisdiction for temporary use or repair, application shall be made by the owner or user to the chief inspector for permission to reinstall the boiler or pressure vessel in the jurisdiction. When a nonstandard boiler or pressure vessel is removed from this state, it shall not be reinstalled within this state.

(20) Installation, Operation, Sale or Offering for Sale of Nonstandard Boilers or Pressure Vessels. The installation, operation, sale or the offering for sale of nonstandard boilers or pressure vessels in this jurisdiction is prohibited without permission from the board.

(21) Installation of Used or Second-Hand Boilers or Pressure Vessels. Before a used or second-hand boiler or pressure vessel can be installed in this state, an inspection must be made by an inspector qualified by this jurisdiction. Data submitted by the inspector shall be filed by the owner or user of the boiler or pressure vessel with the chief inspector for approval. An internal and external certificate inspection of the object shall be made by an inspector qualified by this jurisdiction, prior to issuance of a certificate of inspection for the object. The inspection shall be documented on a form acceptable to the chief inspector. Boilers and pressure vessels, when installed in the jurisdiction, shall be equipped with fittings and appurtenances that comply with the regulations for new installations, in effect on the date of the installation. Exceptions must be referred to the chief inspector for resolution.

(22) Reinstalled Boilers or Pressure Vessels. When a stationary boiler or pressure vessel is moved and reinstalled, the attached fittings and appurtenances shall comply with these regulations for new installations, in effect on the date of the installation. Exceptions must be referred to the chief inspector for resolution.



(23) Working Pressure for Existing Installations. Any inspector may decrease the working pressure on any existing installation if the condition of the boiler or pressure vessel warrants it. If the owner or user does not concur with the inspector's decision, the owner or user may appeal to the board which may request a joint inspection by the chief inspector or a deputy inspector and the inspector. The chief inspector shall render a report to the board and the board shall render the final decision, based upon the data contained in the inspector's reports.

(24) Repairs and Alterations.

(A) When repairs or alterations are to be made to boilers and pressure vessels, permission shall be obtained from an inspector before the work is started. Organizations making repairs or alterations, must have one (1) of the following authorizations:

1. A valid certificate of authorization for use of the R symbol, issued by the National Board; or

2. A certificate of authorization from the board of boiler and pressure vessel rules.

(B) All work shall conform to the rules of the *National Board Inspection Code* or API-510, as applicable.

(25) Riveted Patches. In applying riveted patches, the design and method of installation shall meet the requirements of subsection (24)(B).

(26) Safety Appliances.

(A) No person shall attempt to remove or do any work on any safety appliance prescribed by these regulations while the appliance prescribed is subject to pressure.

(B) Should any of these appliances be removed for repair during an outage of a boiler or pressure vessel, they must be reinstalled and in proper working order before the object is again placed in service.

(C) No person shall alter any safety or safety relief valves or pressure relief devices in any manner to maintain a working pressure in excess of that stated on the boiler or pressure vessel inspection certificate.

(D) Repair of ASME- and NB-stamped safety or safety relief valves shall be made only by an organization which holds a valid Certificate of Authorization for use of the NB Safety or Safety Relief Valve Repair VR symbol stamp and the scope of the certificate includes the appropriate type of valve to be repaired.

(27) Requirements For New Installations.

(A) No boiler or pressure vessel shall be installed in this state after October 27, 1986, unless it has been constructed in accordance

with the *ASME Code*, registered with the NB and installed in conformity with these regulations except—

1. Those exempt by the Act; or

2. Those outlined in subsection (1)(B) of this rule.

(B) The stamping shall not be concealed by lagging or paint and shall be exposed at all times unless a suitable record is kept of the location of the stamping so that it may be readily uncovered at any time this may be desired.

(28) Application of State Serial Numbers.

(A) Upon completion of the installation of a boiler or pressure vessel or at the time of the initial certificate inspection of an existing installation, each boiler or pressure vessel shall be stamped by the inspector with a serial number of the state, consisting of letters and figures to be not less than five-sixteenths inch (5/16") in height and arranged as follows:

MO 123456

Alternatively, a metal tag issued by the chief inspector, may be securely affixed using screws, rivets, wire or other means so that the tag cannot be easily removed. The "MO" number may not be transferred to any other object. The tag or stamping shall be placed as close to the ASME nameplate or stamping, as practicable.

(B) All cast iron, low pressure heating boilers (including all "HLW" stamped hot water supply boilers) shall have securely attached to the front of the boiler a corrosion-resistant metal tag of not less than one inch by four inches (1" × 4") in size which shall have the serial number of the state stamped on it. All pressure vessels constructed of cast iron, or of material of a thickness that it should not be stamped, shall have securely attached a corrosion-resistant metal tag not less than one inch by four inches (1" × 4") in size which shall have the serial number of the state stamped on it.

(29) Variations.

(A) Any person who believes the rules promulgated by the board are unreasonable or impose an undue burden upon the owner or user may request a variation from the rule. The request for variation shall be in writing and shall specify how equivalent safety is to be maintained. The board, after investigation and hearing as it may direct, may grant a variation from the terms of any rule provided special conditions as may be specified are maintained in order to provide equivalent safety.

(B) When there is reason to believe, or upon receipt of a complaint that a variation does not provide freedom from danger equivalent to that described the published rule, the board, after notice to the owner or user and complainant after the hearing and investigation as it may direct, may continue in force, suspend, revoke or modify the conditions specified in any variation. No declaration, act or omission of the board or of the chief inspector, deputy inspectors or special inspectors other than a written order authorizing a variation as permitted previously, shall be deemed to exempt, either wholly or in part, expressly or implied, any owner or user from full compliance with the terms of any rule.

(30) Penalties. Any person, firm or corporation violating any of the provisions of these rules shall be guilty of a misdemeanor and subject to a fine to be collected by suit or through compromise as provided for in section 650.270, RSMo of the Act. Each day of operation in violation of the provisions shall be considered a separate offense.

*AUTHORITY: section 650.215, RSMo (1994). * Original rule filed May 12, 1986, effective Oct. 27, 1986. Amended: Filed Dec. 1, 1987, effective Feb. 11, 1988. Amended: Filed Sept. 27, 1990, effective Feb. 14, 1991. Amended: Filed Oct. 3, 1995, effective April 30, 1996.*

**Original authority 1984, amended 1990, 1993, 1995.*



MISSOURI DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE SAFETY

BOILER OR PRESSURE VESSEL - REPORT OF INSPECTION

DATE INSP	CERT EXP DATE	CERT POST Y N	STATE NO	NAT'L BRD NO	OWNER NO	OTHER NO
NATURE OF BUSINESS				KIND OF INSP EXT INT	CERT INSP Y N	SPECIFIC LOC
OWNER						
OWNER ADDRESS						
OWNER CITY			OWNER STATE	OWNER ZIP CODE		
USER						
USER ADDRESS						
USER CITY			USER STATE	USER ZIP CODE	COUNTY	
TYPE BOILER	YR BLT	MANUFACTURER			HEATING SURFACE	PRES GA TESTED Y N
USE		FUEL	METHOD OF FIRE			
TYPE PRES VESSEL	YR BLT	MANUFACTURER			VOLUME - CU. FT.	PRES GA TESTED Y N
USE		CORR SERVICE	CONTENTS			
ALLOW PRES THIS INSP	ALLOW PRES PREV INSP	S R VALVE SET AT	HYDRO TEST Y N	PSI	DATE	
EXPLAIN IF PRESSURE CHANGED					SVRC REQUIRED	
IS CONDITION OF OBJECT SUCH THAT A CERTIFICATE MAY BE ISSUED? IF NO, EXPLAIN FULLY BELOW. YES NO					TOTAL SVRC	
UNLESS OTHERWISE NOTED BELOW THE OBJECT ON THIS REPORT IS CONSIDERED SAFE FOR CONTINUED SERVICE.						
INSPECTOR'S FINDINGS						
NAME AND TITLE OF PERSON TO WHOM REQUIREMENTS WERE EXPLAINED					PHONE NUMBER	
I HEREBY CERTIFY THIS IS A TRUE REPORT OF MY INSPECTION						
INSPECTOR'S SIGNATURE					STATE COMMISSION NUMBER/EMPLOYED BY	
FOR OFFICE USE ONLY			SHOP INSPECTION		TOTAL CHARGE	
INSPECTION			INSPECTION CERTIFICATE		MISC EXPENSE	
SPECIAL INSPECTION			HYDROSTATIC INSPECTION		TRAVEL EXPENSE	

MO 812-C511 (9-89)

DISTRIBUTION: WHITE - STATE CANARY/PINK - DISTRIBUTION AS NEEDED



APPENDIX 5 - NATIONAL BOARD FORMS

FORM NB-4
NOTICE
NEW BUSINESS OR DISCONTINUANCE
USED BY AUTHORIZED INSURANCE INSPECTION AGENCIES

To: _____ JURISDICTION _____

1. DATE OF NOTICE _____

2. Notice of: New insurance business
 Discontinuance or cancellation
 Refusal to insure

3. Effective date _____

4. Type of object High pressure boiler
 Low pressure boiler
 Pressure vessel

5. OBJECT	6. OWNER'S NO	7. JURISDICTION NO.	8. NATIONAL BOARD NO.	9. NAME OF MANUFACTURER
10. NAME OF OWNER				
11. NAME OF OWNER INCLUDING COUNTY				
12. LOCATION OF OBJECT INCLUDING COUNTY				
13. USER OF OBJECT (IF SAME AS OWNER SHOW "SAME")				
14. DATE OF LAST CERTIFICATE INSPECT., IF ANY	15. CERTIFICATE ISSUED <input type="checkbox"/> Yes <input type="checkbox"/> No	16. REASON FOR DISCONTINUANCE OR CANCELLATION <input type="checkbox"/> Phys. condition <input type="checkbox"/> Out of use <input type="checkbox"/> Other		
17. <input type="checkbox"/> REMARKS (USE REVERSE SIDE)				

18. By: _____ CHIEF INSPECTOR _____ BRANCH OFFICE

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Columbus, OH. 43229

NB-4
Rev. 1



APPENDIX 5 - NATIONAL BOARD FORMS

FORM NB-5 BOILER OR PRESSURE VESSEL DATA REPORT

FIRST INTERNAL INSPECTION

Standard Form for Jurisdictions Operating Under the ASME Code

1	DATE INSPECTED MO DAY YEAR	CERT EXP DATE MO YEAR	CERTIFICATE POSTED <input type="checkbox"/> Yes <input type="checkbox"/> No	OWNER NO.	JURISDICTION NUMBER	NAT'L BD NO <input type="checkbox"/> OTHER NO <input type="checkbox"/>
2	OWNER OWNER STREET ADDRESS NUMBER	NATURE OF BUSINESS	KIND OF INSPECTION <input type="checkbox"/> Int <input type="checkbox"/> Ext	CERTIFICATE INSPECTION <input type="checkbox"/> Yes <input type="checkbox"/> No	STATE	ZIP
3	USERS NAME - OBJECT LOCATION USERS STREET ADDRESS NUMBER	SPECIFIC LOCATION IN PLANT	OBJECT LOCATION - COUNTY	USERS CITY	STATE	ZIP
4	TYPE <input type="checkbox"/> FT <input type="checkbox"/> WT <input type="checkbox"/> CI <input type="checkbox"/> Air Tank <input type="checkbox"/> Water Tank <input type="checkbox"/> Other	YEAR BUILT	MANUFACTURER	YEAR INST	<input type="checkbox"/> New <input type="checkbox"/> Second Hand	
5	USE <input type="checkbox"/> Power <input type="checkbox"/> Process <input type="checkbox"/> Steam Htg <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> Storage <input type="checkbox"/> Heat Exchange <input type="checkbox"/> Other	FUEL (BOILER)	METHOD OF FIRING (BOILER)	PRESSURE GAGE TESTED <input type="checkbox"/> Yes <input type="checkbox"/> No		
6	PRESSURE This Inspection _____ Prev. Inspection _____	SAFETY - RELIEF VALVES Set at _____	EXPLAIN IF PRESSURE CHANGED			
7	IS CONDITION OF OBJECT SUCH THAT A CERTIFICATE MAY BE ISSUED? <input type="checkbox"/> Yes <input type="checkbox"/> No (If no explain fully on back of form - listing code violations)				HYDRO TEST <input type="checkbox"/> Yes _____ psi Date _____ <input type="checkbox"/> No	
8	SHELL No. _____	DIAMETER <input type="checkbox"/> ID <input type="checkbox"/> OD in. _____	OVERALL LENGTH ft. _____ in. _____	THICKNESS in. _____	TOTAL HTG SURFACE (BOILER) Sq Ft _____	MATERIAL ASME Spec Nos _____
9	ALLOWABLE STRESS psi _____	BUTT STRAP Thks _____	<input type="checkbox"/> Single <input type="checkbox"/> Double	HEADERS - W T BOILERS Thickness _____ in. _____	TYPE <input type="checkbox"/> Box <input type="checkbox"/> Sinuous <input type="checkbox"/> Wtr Wall <input type="checkbox"/> Other _____	
10	TYPE LONGITUDINAL SEAM <input type="checkbox"/> Lap <input type="checkbox"/> Butt <input type="checkbox"/> Welded <input type="checkbox"/> Brazed <input type="checkbox"/> Riveted			RIVETED Dia Hole _____ in. _____	PITCH in. X _____ in. X _____ in. _____	SEAM EFF %
11	HEAD THICKNESS in. _____	HEAD TYPE <input type="checkbox"/> Plus <input type="checkbox"/> Minus <input type="checkbox"/> Flat <input type="checkbox"/> Quick Opening	<input type="checkbox"/> Fixed <input type="checkbox"/> Movable	RADIUS DISH in. _____	ELLIP RATIO	BOLTING No. _____ Dia. _____ in. Material _____
12	TUBE SHEET THICKNESS in. _____	TUBES No. _____ Dia. _____ in. Length _____ ft. _____	PITCH (W T BLRS) in. X _____ in. _____	LIGAMENT EFF %		
13	FIRE TUBE BOILERS STAYS ABOVE TUBES Front No. _____ Rear No. _____		DISTANCE UPPER TUBES TO SHELL Front _____ in. Rear _____ in.	STAYED AREA Front Head _____	Above Tubes _____ Below Tubes _____ Rear Head _____ Below Tubes _____	
14	FURNACE - TYPE Adamson (No. Sect. _____) <input type="checkbox"/> Corrugated <input type="checkbox"/> Plain <input type="checkbox"/> Other _____			THICKNESS in. _____	TOTAL LENGTH ft. _____ in. _____	TYPE LONG SEAM <input type="checkbox"/> Welded <input type="checkbox"/> Riveted <input type="checkbox"/> Seamless
15	STAYBOLTS - TYPE <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Hollow <input type="checkbox"/> Drilled (Size Hole _____ in.)			DIAMETER in. _____	PITCH in. X _____ in. _____	NET AREA sq in. _____
16	SAFETY - RELIEF VALVES No. _____ Size _____		TOTAL CAPACITY Lb/Hr _____ Cfm Btu/Hr _____	OUTLETS No. _____ Size _____	PROPERLY DRAINED <input type="checkbox"/> Yes <input type="checkbox"/> No (If "No" explain on back of form)	
17	STOP VALVES <input type="checkbox"/> Yes <input type="checkbox"/> No	ON STEAM LINE <input type="checkbox"/> Yes <input type="checkbox"/> No	ON RETURN LINES <input type="checkbox"/> Yes <input type="checkbox"/> No	OTHER CONNECTIONS <input type="checkbox"/> Yes <input type="checkbox"/> No	STEAM LINES PROPERLY DRAINED <input type="checkbox"/> Yes <input type="checkbox"/> No (If "No" explain on back of form)	
18	FEED PIPE Size _____ in. _____	FEED APPLIANCES No. _____	TYPE DRIVE <input type="checkbox"/> Steam <input type="checkbox"/> Motor	CHECK VALVES <input type="checkbox"/> Yes <input type="checkbox"/> No	FEED LINE <input type="checkbox"/> Yes <input type="checkbox"/> No	RETURN LINE <input type="checkbox"/> Yes <input type="checkbox"/> No
19	WATER GAGE GLASS No. _____	TRY COCKS No. _____	BLOW OFF PIPE Size _____ in. Location _____	INSPECTION OPENINGS COMPLY WITH CODE <input type="checkbox"/> Yes <input type="checkbox"/> No (If "No" explain on back of form)		
20	CAST IRON BOILERS Length _____ in. Width _____ in. Height _____ in. No. _____			DOES WELDING ON STEAM, FEED, BLOWOFF AND OTHER PIPING COMPLY WITH CODE <input type="checkbox"/> Yes <input type="checkbox"/> No (If "No" explain on back of form)		
21	SHOW ALL CODE STAMPING ON BACK OF FORM. Give details (use sketch) for special objects NOT covered above - such as Double wall vessels etc			DOES ALL MATERIAL OTHER THAN AS INDICATED ABOVE COMPLY WITH CODE <input type="checkbox"/> Yes <input type="checkbox"/> No (If "No" explain on back of form)		
22	NAME AND TITLE OF PERSON TO WHOM REQUIREMENTS WERE EXPLAINED:					
23	I HEREBY CERTIFY THIS IS A TRUE REPORT OF MY INSPECTION Signature of Inspector _____			IDENT NO. _____	EMPLOYED BY _____	IDENT NO. _____

Complete When Not Registered National Board

Complete When Not Registered National Board

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Col's., O. 43229 NB-5 Rev.0



NATIONAL BOARD INSPECTION CODE

OTHER CONDITIONS AND REQUIREMENTS

A series of horizontal lines providing space for handwritten notes or conditions.

CODE STAMPING

A large rectangular box intended for a code stamp.

(Back)



APPENDIX 5 - NATIONAL BOARD FORMS

FORM NB-6 BOILER-FIRED PRESSURE VESSEL
REPORT OF INSPECTION

Standard Form for Jurisdictions Operating Under the ASME Code

1	DATE INSPECTED MO DAY YEAR	CERT EXP DATE MO YEAR	CERTIFICATE POSTED <input type="checkbox"/> YES <input type="checkbox"/> NO	OWNER NO	JURISDICTION NUMBER	NAT'L BO. NO. <input type="checkbox"/>	OTHER NO. <input type="checkbox"/>
2	OWNER				NATURE OF BUSINESS	KIND OF INSPECTION <input type="checkbox"/> INT <input type="checkbox"/> EXT	
	OWNER STREET ADDRESS NUMBER				OWNERS CITY	STATE	ZIP
3	USERS NAME - OBJECT LOCATION				SPECIFIC LOCATION IN PLANT	OBJECT LOCATION - COUNTY	
	USERS STREET ADDRESS NUMBER				USERS CITY	STATE	ZIP
4	TYPE <input type="checkbox"/> FT. <input type="checkbox"/> WT. <input type="checkbox"/> CI. <input type="checkbox"/> OTHER _____			YEAR BUILT	MANUFACTURER		
5	USE <input type="checkbox"/> POWER <input type="checkbox"/> PROCESS <input type="checkbox"/> STEAM HTG. <input type="checkbox"/> HWH <input type="checkbox"/> HWS <input type="checkbox"/> OTHER _____				FUEL	METHOD OF FIRING	PRESSURE GAGE TESTED <input type="checkbox"/> YES <input type="checkbox"/> NO
6	PRESSURE ALLOWED			SAFETY-RELIEF VALVES SET AT _____ TOTAL CAPACITY _____		HEATING SURFACE OR BTU	
7	THIS INSPECTION _____ PREV INSPECTION _____				IS CONDITION OF OBJECT SUCH THAT A CERTIFICATE MAY BE ISSUED? <input type="checkbox"/> YES <input type="checkbox"/> NO (IF NO EXPLAIN FULLY UNDER CONDITIONS)		
					HYDRO TEST <input type="checkbox"/> YES _____ PSI DATE _____ <input type="checkbox"/> NO		
8	<p>CONDITIONS: With respect to the internal surface, describe and state location of any scale, oil or other 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 inspection</p>						
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				IDENT. NO	EMPLOYED BY		IDENT NO

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Col's., OH 43229

NB-6
Rev. 3



APPENDIX 5 - NATIONAL BOARD FORMS

FORM NB-7 PRESSURE VESSELS

REPORT OF INSPECTION

Standard Form for Jurisdictions Operating Under the ASME Code

1	DATE INSPECTED MO DAY YEAR	CERT EXP DATE MO YEAR	CERTIFICATE POSTED <input type="checkbox"/> YES <input type="checkbox"/> NO	OWNER NO	JURISDICTION NUMBER	NAT'L BO. NO. <input type="checkbox"/>	OTHER NO. <input type="checkbox"/>
2	OWNER			NATURE OF BUSINESS	KIND OF INSPECTION <input type="checkbox"/> INT <input type="checkbox"/> EXT		CERTIFICATE INSPECTION <input type="checkbox"/> YES <input type="checkbox"/> NO
	OWNER STREET ADDRESS NUMBER			OWNERS CITY	STATE	ZIP	
3	USERS NAME - OBJECT LOCATION			SPECIFIC LOCATION IN PLANT		OBJECT LOCATION - COUNTY	
	USERS STREET ADDRESS NUMBER			USERS CITY	STATE	ZIP	
4	TYPE <input type="checkbox"/> AIR TANK <input type="checkbox"/> WATER TANK <input type="checkbox"/> OTHER _____			YEAR BUILT	MANUFACTURER		
5	USE <input type="checkbox"/> STORAGE <input type="checkbox"/> PROCESS <input type="checkbox"/> HEAT EXCHANGE <input type="checkbox"/> OTHER _____			SIZE	PRESSURE GAGE TESTED		
6	PRESSURE ALLOWED		SAFETY-RELIEF VALVES		EXPLAIN IF PRESSURE CHANGED		
	THIS INSPECTION _____ PREV INSPECTION _____		SET AT _____ TOTAL CAPACITY _____				
7	IS CONDITION OF OBJECT SUCH THAT A CERTIFICATE MAY BE ISSUED?					HYDRO TEST	
	<input type="checkbox"/> YES <input type="checkbox"/> NO (IF NO EXPLAIN FULLY UNDER CONDITIONS)					<input type="checkbox"/> YES _____ PSI DATE _____ <input type="checkbox"/> NO	
8	CONDITIONS: <i>With respect to the internal surface, describe and state location of any scale, oil or other 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 inspection.</i>						
9 REQUIREMENTS: <i>(List Code violations)</i>							
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				IDENT. NO	EMPLOYED BY	IDENT. NO	

