PUBLIC PROTECTION CABINET
Department of Housing, Buildings and Construction
(Amendment)

815 KAR 15:025. New installations, general design, construction, and inspection criteria for boilers, pressure vessels, and pressure piping.

RELATES TO: KRS Chapter 236
STATUTORY AUTHORITY: KRS 236.030, 236.040, 236.060, 236.110, 236.120, 236.240
CERTIFICATION STATEMENT:
NECESSITY, FUNCTION, AND CONFORMITY: KRS 236.030 requires the commissioner to promulgate administrative regulations that establish standards for the safe construction, installation, inspection, and repair of boilers, pressure vessels, and associated pressure piping. KRS 236.040 requires all boiler and pressure vessels to conform to the rules and regulations formulated by the commissioner and establishes the standards for pressure piping and pressure vessels for human occupancy. KRS 236.110 establishes the inspection requirements for boilers, pressure vessels, and pressure piping. This administrative regulation establishes the design, construction, and inspection requirements of the boiler inspection section for all boilers and pressure vessels not exempted by KRS 236.060.

Section 1. Minimum Standards.

(1)

(a) Boilers and pressure vessels. All new boilers and new pressure vessels shall comply with applicable provisions of 815 KAR Chapter 15 and the ASME Boiler and Pressure Vessel Code, 2025 edition~~[2013 Edition or subsequent editions, as established by KRS 236.040(2)]~~, except new boilers and new pressure vessels approved as state specials pursuant to Section 4 of this administrative regulation.

(b) All pressure vessels for human occupancy shall comply with the ASME Safety Standard for Pressure Vessels for Human Occupancy, PVHO-1-2023 edition~~[2012 Edition or subsequent editions, as established by KRS 236.040(3)]~~.

(c) All blowdown and blowoff receivers shall comply with the ASME Boiler and Pressure Vessel Code, 2025 edition and be stamped as per paragraph (2) below.

(d) All pressurized expansion tanks in closed heating systems that have a MAWP in excess of 30 psi shall comply with the ASME Boiler and Pressure Vessel Code, 2025 edition.

(2) ASME stamping~~[stamps]~~. New boilers and new pressure vessels shall be stamped with the applicable certification mark of the ASME Boiler and Pressure Vessel Code.

(3) Installation standard. Installation of all boilers and pressure vessels shall conform to the National Board Inspection Code Part 1, 2025~~[2015]~~ edition~~[or subsequent editions]~~. Automatically fired boilers at or below 12.5 million BTU input shall conform to the National Fuel Gas Code NFPA, NFPA 54 2024 edition, as adopted by the Kentucky Building Code and incorporated by reference in 815 KAR 7:120, if gas-fired, or Standard for Oil Burning Equipment NFPA 31, 2024 edition, if liquid-fuel burning. If an automatically fired boiler is over 12.5 million BTU input, then the automatically fired boiler shall conform to the Standard for Oil Burning Equipment NFPA 85, 2023 edition.

(4) Pressure piping.

(a) All new pressure piping installations connected to the boiler or pressure vessel shall conform to the National Board Inspection Code Part 1, 2025~~[2015]~~ edition, and the applicable standards referenced in this subsection, as established by KRS 236.040(2):

~~[1.] [ASME Code for Power Piping, B31.1, 2012 edition or subsequent editions;]~~

~~[2.] [ASME Code for Process Piping, B31.3, 2012 edition or subsequent editions;]~~
~~[3.] [ASME Code for Refrigeration Piping and Heat Transfer Components, B31.5, 2013 edition or subsequent editions;]~~
~~[4.] [ASME Code for Building Services Piping, B31.9, 2011 edition or subsequent editions; and]~~
~~[5.] [ASME Code for Hydrogen Piping and Pipelines, B31.12, 2014 edition or subsequent editions.]~~

(b) The maximum allowable design temperature and pressure of the piping system and all of its component parts including flexible joints and hoses shall meet or exceed the operating control settings of the boiler or pressure vessel.

(c) If the maximum allowable design temperature or pressure of the boiler exceeds the maximum design limits of the piping system or any of its component parts including flexible joints and hoses, the pipe and its components shall not be used unless the following conditions are met:

1. The temperature and pressure controls on the boiler are permanently set to prevent operation in excess of the design limits of the piping system; and
2. Safety valve or valves shall be installed on the boiler, pressure vessel, or the piping system to protect the system from excess pressure or temperature.

(d) ~~[(5)]~~ Welded piping joints. Welded joints in pressure piping shall be installed by qualified welders in accordance with the ASME Code, Section IX, as required by the standards referenced in subsection (4) of this section.

Section 2. Manufacturer's Data Report.

(1) A manufacturer's data report on all boilers of steel construction and all pressure vessels constructed in accordance with the ASME Boiler and Pressure Vessel Code shall be filed with the National Board of Boiler and Pressure Vessel Inspectors unless the boiler or pressure vessel is exempted by KRS 236.060 or the pressure vessel has an ASME "UM" certification mark. A pressure vessel with an ASME "UM" certification mark may be registered with the National Board of Boiler and Pressure Vessel Inspectors.

(2) The boilers and pressure vessels required to be filed with the National Board in subsection (1) of this section shall also have~~[include]~~ the National Board registration number stamped on the manufacturer's data~~[date]~~ plate.

Section 3. Installation Inspection or First Inspection and State Registration of New Boilers and Pressure Vessels.

(1) Installation inspection. New installations of boilers, pressure vessels, and associated pressure piping shall be inspected by the department for compliance with applicable ASME Boiler and Pressure Vessel Code requirements, the National Board Inspection Code, and this administrative regulation.

(2) Notification of inspection.

(a) If an inspection is required by this administrative regulation, the owner or user shall prepare each boiler, pressure vessel, and pressure piping system for inspection~~[pursuant to this administrative regulation and the National Board Inspection Code, Part H]~~.

(b) The owner or user shall prepare for and apply a hydrostatic pressure or other pressure~~[leak]~~ test on the date of inspection if requested by the boiler inspector, special boiler inspector, or owner-user inspector.

(c) Inspections shall be conducted within seven (7) days of the date of notification or at an agreed-upon time by the contractor and the inspector.

(3) Inspection times. Except as established in 815 KAR 15:027, inspections made by boiler inspectors shall be conducted during normal business hours of the department between 8:00 a.m. and 4:30 p.m. Monday through Friday.

(4) Contractor availability. The boiler and pressure vessel ~~[contractor]~~license holder or the license holder's representative shall be available to the boiler inspector, physically or electronically, at the time of the inspections.
(5) State registration. Upon completion of the installation or at the time of first inspection, a Commonwealth of Kentucky registration number shall be assigned to the boiler or pressure vessel and shall be applied to the boiler or pressure vessel with a metal tag showing the registration number. This tag shall be securely affixed near the manufacturer's name plate or data plate.
(6) Non-registered boilers and non-registered pressure vessels. Boiler inspectors, special boiler inspectors, and owner-user inspectors shall notify the department within thirty (30) days of locating any non-registered boiler or non-registered pressure vessel.
(7) General welding.
(a) If welded assembly has been used, the installing boiler and pressure vessel contractor shall produce the following for the boiler inspector's, special boiler inspector's, or owner's piping inspector's review:
1. The welding procedures; and
2. Proof of qualification and continuity records for the welders and welding operators.
(b) The boiler and pressure vessel contractor shall be responsible for the quality of the welding.
(8) Welded piping joints. Welded joints in pressure piping shall be visually inspected for complete and full root penetration, soundness of the weld and freedom from undercutting, cracking, or other surface imperfections in accordance with the requirements of the applicable ASME B31 Code section. If the visual inspection reveals a potential defect, the boiler inspector, special boiler inspector, or owner's piping inspector may require other nondestructive tests, such as radiography, to be performed by the contractor to verify the soundness of the weld. All tests or retests required by the boiler inspector, special boiler inspector, or owner's piping inspector shall be at the owner's or boiler and pressure vessel contractor's expense.
(9) Hydrostatic pressure test for boilers and pressure vessels.
(a) A hydrostatic pressure test, when applied to a boiler or pressure vessel, shall conform to the testing procedures and pressures as specified in the original code of construction. The pressure shall be under proper control so that in no event shall the required test pressure exceed the testing requirements listed in the original code of construction.
(b) During the hydrostatic pressure test, the safety valve or valves shall be removed. If the safety valve or valves cannot be removed, then each valve disc shall be held down by means of a testing clamp and not by screwing down the compression screw upon the spring.
(c) The minimum temperature of the water used to apply a hydrostatic test shall not be less than ambient temperature, but in no case less than seventy (70) degrees Fahrenheit, and the maximum temperature shall not exceed 120 degrees Fahrenheit.
(d) If the only purpose of the test is to determine tightness, the test pressure shall be equal to the relieving pressure of the safety valve having the lowest relief setting.
(10) Inspection of ~~[Pressure test for]~~ pressure piping. Pressure piping systems installed in association with a~~[the]~~ boiler or pressure vessel shall be inspected for proper materials, adequate pressure, and temperature ranges for the boiler or pressure vessel operation and for adequate support and tightness as established in this subsection. Pressure piping systems shall be inspected as follows:
~~[(a)] [Hydrostatic and pressure leak tests.]~~
~~[1.] [Except as stated in paragraph (b), hydrostatic or other leak tests shall be performed on the pressure piping system connected to the boiler or pressure vessel~~

~~and shall conform to the procedures and test pressures outlined in the original code of construction.]~~

~~[2.] [Non-destructive testing shall be used if hydrostatic or leak testing cannot be performed.]~~

~~[3.] [Original mill material stencils and markings used to verify material shall be legible at the time of inspection. Pipe, including welding joints, shall not be painted or covered prior to inspection.]~~

~~[(b)] [Alternative testing.]~~

~~[1.] [The following piping systems shall be inspected visually under in-service conditions:]~~

~~[a.] [Compressed air systems with a MAWP of 200psi or less, a pipe diameter of two (2) inches or less, and no welded joints;]~~

~~[b.] [Hydronic heating or process systems with a MAWP of 100psi or less, a pipe diameter of two (2) inches or less, and no welded joints;]~~

~~[c.] [Steam condensate systems with a MAWP of 50psi or less, a pipe diameter of two (2) inches or less, and no welded joints;]~~

~~[d.] [Non-ammonia refrigeration with a pipe diameter of two (2) inches or less and no welded joints; and]~~

~~[e.] [Cryogenic piping with a pipe diameter of two (2) inches or less and no welded joints.]~~

~~[2.] [Sufficient openings shall be made in any insulation to determine pipe material. Welded piping joints shall not be covered with insulation prior to inspection.]~~

~~[3.] [Pipe may be painted prior to inspection if the owner or user provides documentation of materials that make up the pipe to the inspector. Welded joints shall not be painted prior to inspection.]~~

(a) High Pressure Steam (above 15 psi). All boiler external piping shall be installed in compliance with ASME Section I and ASME B31.1. Non-boiler external piping must comply with ASME B 31.1.

1. All boiler external and non-boiler external piping shall not be painted or covered prior to inspection and shall have mill stenciling legible to the inspector.

2. All welded non-boiler external piping shall be hydrostatically tested with water to 1.5 times the MAWP of the piping system as protected by a safety valve. If a hydrostatic test cannot be performed, other non-destructive examination shall be performed on all welds.

3. Non-welded pipe shall be inspected in service. Small bore tubing three-eighths (0.375) inches or less in diameter as used for heat tracing of process piping systems shall not be inspected.

(b) Low Pressure Steam (15 psi or less). Boiler external piping and field assembled cast iron boilers shall be hydrostatically tested with water to at least 25 psi. Non-boiler external piping shall be visually inspected at operating pressure and no hydrostatic test or pressure test is required. Welded joints shall remain uncovered until inspected.

(c) Steam condensate. Steam condensate piping that can be pressurized with live steam above 15 psi or that leads to a pressure vessel shall be subject to the same inspection requirements as sub-paragraph (3)(a) of this regulation. Steam condensate piping for low pressure (15 psi or less) systems and pumped condensate leading to a vented condensate receiver may not be inspected.

(d) Anhydrous ammonia.

1. Anhydrous ammonia piping systems shall not have piping or piping joints painted nor covered until inspected.

2. Original mill stencil markings on piping shall be legible to the inspector. Anhydrous ammonia piping systems that are not connected to an existing live system shall be pressure tested with nitrogen to 1.1 times the MAWP of the system.

3. Anhydrous ammonia piping systems that are connected to an existing live ammonia system shall be pressure tested with ammonia gas. If an anhydrous ammonia system is tested with ammonia gas, the system shall be at working pressure and inspected with the sulfur stick or litmus paper method.

(e) Hot oil/thermal fluid.

1. Hot oil/thermal fluid piping systems shall be visually inspected and shall be pressure tested with nitrogen or thermal fluid. A nitrogen test shall be at least 1.1 times the MAWP of the system as protected by a safety valve. A thermal fluid test shall be at least 1.5 times the MAWP of the system as protected by a safety valve.

2. Hot oil/thermal fluid piping systems shall not have piping or piping joints painted nor covered until inspected.

3. Original mill stencil markings on piping shall be legible to the inspector.

(f) Compressed air.

1. Compressed air piping systems that supply air for general utility air, breathing air, instrument air, and similar applications shall be visually inspected.

2. Piping systems that contain pipe that is two (2) inches in diameter or fewer and operate at 200 psi or less may be painted prior to inspection.

3. Welded pipe joints in piping systems that operate above 200 psi and are over two (2) inches in diameter shall be pressure tested with air at 1.1 times the MAWP of the system as protected by a safety valve and shall not be painted prior to inspection.

4. Cross linked polyethylene (PEX) and thermoplastic materials, such as PVC, CPVC, and PVDF, that exhibit brittle failure as defined in ASTM F412 shall not be used for compressed air service. Pipe size one (1) inch in diameter and fewer shall not be inspected.

(g) Hydronic heating. Hydronic heating piping systems that operate at 100 psi or less shall be visually inspected while under normal operating pressure. Welded pipe joints in hydronic heating pipe systems that operate in excess of 100 psi shall be hydrostatically tested with water at 1.3 times the MAWP of the system as protected by a safety valve.

(h) Hoses and flexible connectors. All hoses and flexible connectors used in any pressure piping system shall be marked with the maximum allowable pressure and temperature that the hose or connector is rated. In the alternative, the department shall accept supporting documentation if the documentation is positively linked to the hose or flexible connector.

(i) ~~[(e)]~~ Code compliance. All piping systems provided by boiler and pressure vessel fabricators as part of the boiler or pressure vessel assembly, including skid assembled units, shall have supporting documentation from the fabricator that the pressure piping is in compliance with the appropriate ASME B31 Code and these administrative regulations. Pressure piping inspections shall include determining compliance with applicable ASME B31 Code including material specifications for the piping and component parts. The boiler and pressure vessel contractor shall provide documentation to the boiler inspector, special boiler inspector, owner's piping inspector, or owner-user inspector showing that:

1. The materials used and method of construction meets the manufacturer's procedures and specifications; and

2. The system is utilizing the materials and equipment specified within the temperature and pressure ranges set forth in the design and as required by this administrative regulation.

(11) Inspection by Owner's Piping Inspector.

(a)

1. Owner's piping inspectors shall inspect all new replacement piping for compliance to the applicable ASME piping code to which the piping is installed.

2. The owner's piping inspector shall sign the permit filed by the boiler and pressure vessel contractor performing the piping installation or repair and forward it to the Boiler Inspection Section.

(b)

1. The owner facility license and the independent inspection agency shall maintain copies of the material mill test reports and pressure test information including type of test, pressure at start and end of test, and duration of test for five (5) years pursuant to KRS 236.097(1)(h) and (3)(f).

2. If welded joints are utilized, the file shall contain the qualified welder identification, weld procedure, and procedure qualification used.

(c) If there is a disagreement as to the acceptance of any condition of the piping installation or repair by the owner's piping inspector and owner's user facility, the department shall make the final determination in accordance with the standards established in this administrative regulation.

Section 4. State Special.

(1) Boilers and pressure vessels of special design, which are equivalent to but are not eligible to be stamped to the ASME Code, shall meet the requirements of this section. The prospective owner or user who desires approval of the boiler installation or pressure vessel installation as a state special shall comply with the procedures established in this administrative regulation for each case.

(a) Prior to installation and operation of the boiler or pressure vessel, the proposed owner, user, or the owner's authorized agent shall make written application for permission to install the boiler or pressure vessel. The application shall be submitted to the commissioner.

(b) To establish ASME Boiler and Pressure Vessel Code equivalency, the following data, material, and information shall be submitted with the application for state special approval:

1. Detailed shop drawings and welding details of the proposed construction. All materials shall be in the English language and United States units of measurements listed in the ASME Code;

2. Design calculations and supporting data, which shall include pressure (psi), temperature (deg. F.), use, and other service conditions;

3. Specifications for all construction materials shall conform to the applicable ASME Code standards or their suitable equivalent. If reference is made to a standard or specification of a country other than the United States, a copy shall be attached to indicate how the material is considered equivalent;

4. Copies of the welding procedures to be used and welding qualification test reports for each welding operator or welder to be used. The procedures and tests required in this paragraph shall be made in accordance with the ASME Boiler and Pressure Vessel Code, Section IX, "Welding Qualifications;"

5. If the design exceeds ASME Boiler and Pressure Vessel Code limitation, then API 579/ASME FFS-1, 2007 or later edition shall be used to determine equivalency of the submission;

6. Design drawings and calculations shall be certified by a mechanical engineer holding a professional engineer certification with a background in boilers and pressure vessels;

7. The manufacturer of the vessel shall identify the inspection agency responsible for the shop inspections and shall submit an equivalent ASME manufacturer's data report for the proposed vessel; and

8. The shop inspection agency shall furnish the qualifications of the authorized inspector assigned to make the shop inspections.

(2) Upon completion of the boiler or pressure vessel, a manufacturer's data report, signed by the manufacturer and authorized inspector, shall be submitted to the jurisdictional authorities containing the equivalent type data required by the ASME Boiler and Pressure Vessel Code. ASME Boiler and Pressure Vessel Code data report forms shall not be used.
(3) Upon arrival in the Commonwealth of Kentucky, the boiler or pressure vessel shall be inspected before installation by a boiler inspector to verify compliance with this section.

Section 5. General Requirements.

(1) Boilers.

(a) Safety Valves and Safety Relief Valves

1. Safety valves and safety relief valves must carry the ASME Code stamp suitable for the service intended.

2. The resetting of safety valves and safety relief valves shall be done by a National Board "VR" certificate holder.

3. Safety valves and safety relief valves shall be located and installed so that the device is readily accessible for inspection and repair.

4. Stop valves in inlet or discharge piping, and changeover valves are not permitted.

5. Discharge Piping:

a. Discharge piping must be metal and suitable for the pressure and temperature potentially encountered.

b. Discharge Piping outlet for safety valves and safety relief valves shall be located to prevent injury to persons or property.

c. Discharge Piping for steam boilers that exceed 1500 pounds of steam per hour must exit the building to the outside/outdoors.

d. Discharge piping must be anchored or secured against movement when discharging.

e. Discharge piping shall have a pipe union or other joint close to the safety valve or safety relief valve to disconnect the discharge piping from the valve if directly connected to valve for maintenance.

f. Discharge piping must be increased by one pipe size per every four (4) elbows in the piping system.

(b) Boiler external piping.

1. Boiler external piping shall be installed in accordance with ASME Section I and B31.1.

2. If a power boiler with a manway is connected to a common steam or high temperature water main or header supplied by other boilers, all welded external piping from the boiler out to the second stop valve shall be stamped with any one (1) of the ASME Code symbol stamps for pressure piping, power boilers, or assembly stamps.

3. Carbon Monoxide Detector.

a. Each boiler room containing one or more boilers from which carbon monoxide can be produced shall be equipped with a carbon monoxide detector with a manual reset. Boilers installed in open floor spaces without a defined boiler room shall have the carbon monoxide detector installed no more than three (3) feet away from the emergency shutdown switch and no more than six (6) feet above floor level. It is the installer's responsibility to install the carbon monoxide detector.

b. The carbon monoxide detector shall be interlocked with all boilers to disable the burners when the measured level of carbon monoxide rises above 50 ppm.

c. The carbon monoxide detector shall disable the burners upon loss of power to the detector.

d. The carbon monoxide detector shall have an audible alarm, and be interlocked with the fire alarm system, if the building is equipped with one.

e. The carbon monoxide detector shall be calibrated in accordance with the manufacturer's recommendations or every two years after installation of the detector. A record of calibration shall be posted at or near the boiler, or be readily accessible to a boiler inspector or special boiler inspector. It is the owner or user's responsibility to maintain the carbon monoxide detector.

f. The requirements of this subsection apply to boiler and mechanical rooms where new boilers are installed, or existing boiler rooms where boilers are replaced.

(c) Boilers having direct ducted combustion air intakes and combustion discharge vents where birds and wildlife can make nests or obstruct these openings must have suitable screens or caps to prevent obstructions. Gas fuel train vents must have screens to prevent obstruction at their terminal point.

(d) Inspection of flue and chimney.

1. When new boilers are installed in existing boiler rooms and ducted into existing masonry chimneys, an inspection of the chimney and flue must be done by the installing contractor or a company that performs such inspections on behalf of the installing contractor. A letter stating that the chimney is safe and suitable for the service intended shall be given to the inspector, and will be kept on file at the boiler section office.

2. Condensing boilers shall not be ducted into masonry chimneys.

(e) Manually operated boilers and Historic Boilers. Manually operated boilers shall be operated as historic boilers and shall comply with National Board Inspection Code, Part 2, Section 6 "Supplements."

1. Small scale steam locomotives operating on track gauge less than 24" shall be inspected as non-traditional, noncode historic steam boilers.

2. Non-traditional, noncode boilers shall:

a. Be hydrostatically tested to at least one and one half times the normal working pressure.

b. Have at least one spring type "Pop" safety valve set at or below the normal operating pressure, which can relieve all the steam from the boiler during an accumulation test.

c. Have at least one water glass to show the water level in the boiler.

d. Have at least two means of introducing feedwater to the boiler. The failure of one device shall not cause the disruption of the other device.

e. Have a blowdown or drain valve.

(2) Pressure Vessels:

(a) Safety valves, safety relief Valves, and rupture discs.

1. Safety valves, safety relief valves, and rupture discs must carry the ASME Code stamp and NBIC Certification stamp.

2. The resetting of safety valves and safety relief valves shall be done by a National Board "VR" Certificate holder.

3. Safety valves and safety relief valves shall be located and installed so that the device is readily accessible for inspection and repair.

4. A safety valve, safety relief valve, or rupture disc shall be placed on a heat exchanger or in the piping connecting to the heat exchanger before the first stop valve in the piping on the side of the heat exchanger receiving heat.

5. Discharge Piping:

a. Discharge piping must be metal, and suitable for the service intended.

b. The discharge piping outlet for safety valves and safety relief valves shall be located to prevent injury to persons or property.

c. Discharge piping must be anchored or secured against movement when discharging. Discharge piping shall have a pipe union or other joint close to the safety valve or safety relief valve to disconnect the discharge piping from the valve. Piping must be arranged for proper drainage.

d. Discharge piping must be increased by one pipe size per every four (4) elbows in the piping system.

(b) Omission or removal of a Safety Relief Valve or pressure relieving device.

1. If a pressure relieving device is omitted or removed, the device shall be omitted or removed in accordance with ASME Section VIII, Division 1, UG-140, Appendix M and ASME Section VIII, Division 2, Part 9, or Division 3, Part KR.

2. If a pressure relieving device is omitted or removed pursuant to the standards established in subparagraph 1. of this paragraph, except ASME Section VIII, Division 1, Appendix M., the Boiler Inspection Section shall be notified prior to the omission or removal, and prior to the pressure vessel being placed in service.

3. The required documentation of calculations pursuant to paragraph (a) in this subsection shall be submitted to the Boiler Inspection Section for review and acceptance or rejection of the proposed omission or removal.

(c) Leased Pressure Vessels.

1. Leased pressure vessels shall have the owner's name and telephone number visible to the inspector via paint or label.

2. If a vendor sells a leased vessel to a location where installed, the lessor/installer shall apply a label that states that the vessel has been sold to the location, give the new owner's name and date of sale, and this label shall cover the original owner's name.

3. The lessor must provide a copy of the operating certificate to the location where the vessel is installed, and the operating certificate must be displayed on or near the vessel or kept in a file at the lessee's office.

(d) DOT Cylinders. DOT cylinders, when used in manifolded and in stationary service (not transported) and filled onsite must not be filled or installed indoors. Clearances. Except for Mobile Boiler Rooms, the following requirements shall apply:

1. All boilers and pressure vessels in new boiler rooms shall be installed in accordance with the National Board Inspection Code.

2. Replacement boilers and pressure vessels in existing boiler rooms shall have a minimum of two (2) feet clearance horizontally on all service sides.

3. Horizontal manway openings in boilers and pressure vessels shall have at least five (5) feet clearance between the manhole opening and any wall, equipment, piping, or other obstruction that will prevent a person from entering the boiler or pressure vessel. Consideration shall be given for additional clearance for emergency personnel attending to a person who has entered the vessel.

4. A passageway at least twenty-four (24) inches wide by five (5) feet high through the boiler or mechanical room shall be provided and maintained for the free passage of a person to each exit, and around the boilers and pressure vessels within.

5. Boilers installed on stands, or other supports which are over eight (8) feet above floor level shall have platforms and ladders installed to provide access for inspection.

6. Autoclaves/Sterilizers that have dedicated electric steam boilers attached shall either have at least two (2) feet clearance on both sides of the cabinet or be installed in a cabinet capable of movement to reasonably accommodate inspection .

7. Piping, ducts, and vents and their supports shall be arranged so that the clearances required are not compromised.

8. The clearances of this section shall be maintained for the life of the vessel.

(3) Mobile Boiler Units. Mobile boiler units shall:

(a) Provide for the general inspection and maintenance of the boiler or pressure vessel, including the removal and replacement of tubes.

(b) The manufacturer's data plate shall have at least two (2) feet of clearance to allow it to be read, or a suitable opening in the enclosure with a door or removable panel.

(c) Have at least eighteen (18) inches clearance between the top manway and roof of enclosure, or if less than eighteen inches, provide an access hatch in the roof of the enclosure centered over the manway. A roof access hatch shall be at least thirty-six (36) inches by thirty-six (36) inches.

(d) . Have openings with doors or removable panels in the sides of the enclosure to access handholes if handholes are within twenty-four (24) inches of the enclosure wall. Such openings shall be at least twenty-four (24) inches by twenty-four (24) inches.

(e) . All safety valve discharge piping and gas and other vent piping shall exit the enclosure through the roof or sides.

(f) Mobile Boiler Rooms shall have an emergency stop switch located on the exterior of the enclosure that is easily accessible.

~~[(1)] [Safety appliances. The safety appliances required by these administrative regulations shall not be removed or tampered with except for the purpose of making repairs. The resetting of safety valves shall be done by a V-R stamp holder.]~~

~~[(2)] [Additional Hazards. If an additional hazard is possible by exposure of a pressure vessel to fire or other unexpected sources of external heat, supplemental pressure relieving devices shall be installed capable of protecting against excessive pressure. These supplemental pressure relieving devices shall be capable of preventing the pressure from rising more than twenty-one (21) percent above the MAWP.]~~

~~[(3)] [Pressure relieving device.]~~

~~[(a)] [A pressure relieving device shall be constructed, located, and installed so that the device is readily accessible for inspection and repair and cannot be readily rendered inoperative; and]~~

~~[(b)] [A pressure relieving device shall be selected so that the intended service of the pressure relieving device corresponds with the boiler or pressure vessel on which the pressure relieving device is installed.]~~

~~[(4)] [Relieving capacity. The minimum relieving capacity of the safety valve(s) or safety relief valve(s) shall be equal to or exceed the maximum output of the boiler.]~~

~~[(5)] [Omission or removal of pressure relieving device.]~~

~~[(a)] [If a pressure relieving device is omitted or removed, the device shall be omitted or removed in accordance with ASME Section VIII, Division 1, UG-140, Appendix M and ASME Section VIII, Division 2, Part 9, or Division 3, Part KR.]~~

~~[(b)] [If a pressure relieving device is omitted or removed pursuant to the standards established in subparagraph 1. of this paragraph, except ASME Section VIII, Division 1, Appendix M., the Boiler Inspection Section shall be notified prior to the omission or removal, and prior to the pressure vessel being placed in service.]~~

~~[(c)] [The required documentation of calculations pursuant to paragraph (a) in this subsection shall be submitted to the Boiler Inspection Section for review and acceptance or rejection of the proposed omission or removal.]~~

~~[(6)] [Location of discharges to atmosphere. The discharge of safety valves, blowoff pipes, and other outlets shall be located to prevent injury to persons and property.]~~

~~[(7)] [Boiler external piping.]~~

~~[(a)] [Boiler external piping shall be attached in accordance with ASME Section I and B31.1.]~~

~~[(b)]~~

~~[1.] [If two (2) or more boilers with manholes are connected to a common steam or high temperature water main or header, all welded external piping from the boiler out to the second stop valve shall be installed by a manufacturer or contractor~~

~~authorized to use any one (1) of the ASME Code symbol stamps for pressure piping, power boilers, or assembly stamps.]~~

~~[2.] [The piping or fittings, adjacent to the welded joint farthest from the boiler, shall be stamped with the pressure piping, power boiler, or assembly code symbol stamp of the ASME when approved by the boiler inspector, special inspector, or owner-user inspector.]~~

~~[(8)] [Manually fired boilers.]~~

~~[(a)] [Gauge cocks. Each manually fired boiler shall comply with ASME Section I, except a manually fired boiler built before the publication of the 1991 Addenda to ASME Section I (1989 Edition), shall have three (3) or more gauge cocks located within the range of the visible length of the water glass, except if the boiler has two (2) water glasses with independent connections to the boiler located on the same horizontal lines and not less than two (2) feet apart. Two (2) gauge cocks shall be sufficient for boilers not over thirty-six (36) inches in diameter in which the heating surface does not exceed 100 square feet.]~~

~~[(b)] [Fusible plugs. A fire-actuated fusible plug, if used, shall conform to the requirements of ASME Section I, Paragraphs A-19, A-20 and A-21.]~~

~~[(9)] [Clearance.]~~

~~[(a)] [If boilers or pressure vessels are replaced or new boilers or new pressure vessels installed in either existing or new buildings, a minimum of two (2) feet shall be provided on all service sides. Boiler and pressure vessels having manholes shall have five (5) feet clearance between the manhole opening and any wall, ceiling, or piping that will prevent a person from entering the boiler or pressure vessel.]~~

~~[(b)] [Boilers shall be installed to:]~~

~~[1.] [Allow adequate space for their proper operation and their appurtenances;]~~

~~[2.] [Allow inspection of all surfaces, tubes, water walls, economizer, piping, valves, and other equipment; and]~~

~~[3.] [Allow for necessary maintenance and repair.]~~

~~[(c)] [A boiler or pressure vessel subject to external corrosion shall be installed so that there is sufficient access to all parts of the exterior to permit proper inspection of the exterior surfaces, or the boiler or pressure vessel shall have a connection so that the vessel can be readily removed from its location for inspection.]~~

~~[(d)] [If a cylindrical vessel is installed in a vertical position and subject to corrosion, the bottom head, if dished, shall be concave to pressure to facilitate proper drainage.]~~

~~[(e)] [The installed boiler or pressure vessel shall be located so that the data plate shall be accessible to the boiler inspector, special inspector, or owner-user inspector and shall not be obstructed by insulation or other covering not readily removable.]~~

(4) ~~[(10)]~~ Emergency shutdown switches.

(a)

1. Installation of automatically fired power boilers, heating boilers, hot water supply boilers, and fuel-fired or electrically heated pressure vessels shall have a remote boiler shutdown switch located near each boiler room exit door, inside or outside of the boiler room, and marked for easy identification.

2. A boiler room exit door is any door that can be used for personnel to enter and exit the boiler room. If there is more than one (1) exit door to or from the boiler room, a switch shall be located at each door. If access to a boiler room is via a ladder, then the stop switch must be located the end of the ladder first reached when entering the boiler room.

3. Machinery doors, and doors exiting to rooftops where no rooftop exit exists or doors opening below grade for machinery access with no access to grade do not require shutdown switches. A machinery door is considered an exit if no other exit door exists.

4. Shutdown switches must be no less than thirty (30) inches and no more than forty-eight (48) inches above floor level, and no more than five (5) feet horizontally from the door frame unless obscured by the door in fully open position. Doors spaced no more than ten (10) feet apart may have one switch centrally located between them. Boilers located in large spaces shall have an emergency shutdown switch located no less than twenty (20) feet and no more than fifty (50) feet from the boiler.

5. Shutdown switches must not be obscured by doors in the open position. When doors in the open position exceed five feet from the door frame, the shutdown switch shall be placed as close as possible to the edge of the open door.

6. The shutdown switch(es) must be marked with a sign that clearly states that the switch is an emergency shutdown switch.

7. The shutdown switch must be a red color pushbutton switch, which is manually reset by pulling or twisting and pulling.

8. A transparent cover plate that is hinged or easily removable and not lockable may be used to prevent accidental activation of the shutdown switch. The cover plate must allow the switch to be struck with the palm of the hand.

9. The shutdown switch shall cause the control display or indicator lights on a boiler to turn off if so equipped, to indicate that the boiler has been shut down.

10. Activation of the shutdown switch shall cause all new and existing boilers in the room to shut down.

11. If the boiler(s) are located within five (5) feet of the boiler room exit door, and have on/off switches easily identifiable and accessible, then the remote shutdown switch is not required.

12. Any interruption of power to the shutdown switches circuit shall cause the boilers to shut down.

(b) A power boiler or heating boiler installed prior to July 1, 2015 shall be exempt from paragraph (a) of this subsection unless the power boiler or heating boiler installed prior to July 1, 2015 is located in a hospital, rest home, school, day care, jail, health care facilities, or similar institutional facility. The replacement of a boiler in a boiler room containing boilers installed prior to July 1, 2015 requires that the shutoff switches required herein be installed and connected to all new and existing boilers.

(c) Paragraph (a) of this subsection shall not apply to manufacturing and power generating facilities.

~~[(a)]~~

~~[1.] [Installations of power boilers, heating boilers, or hot water supply boilers shall have a manually-operated remote boiler shutdown switch or circuit breaker located near the boiler room door, inside or outside of the boiler room, and marked for easy identification. Consideration shall also be given to the type and location of the switch to safeguard against tampering.]~~

~~[2.] [If there is more than one (1) door to or from the boiler room, a switch shall be located at each door.]~~

~~[3.] [A cover plate may be used to prevent accidental activation of the shutdown switch, if the cover plate is easily opened or removed.]~~

~~[4.] [If a shutdown switch is activated, the shutdown switch shall require a manual reset.]~~

~~[5.] [The shutdown switch shall cause the display or indicator lights on a boiler to turn off, or otherwise indicate that the boiler has been shut down.]~~

~~[6.] [If a new boiler is installed in an existing boiler room, all existing boilers shall be connected to the emergency shutdown switch.]~~

~~[(b)] [A power boiler or heating boiler installed prior to July 1, 2015 shall be exempt from paragraph (a) of this subsection unless the power boiler or heating boiler installed~~

~~prior to July 1, 2015 is located in a hospital, rest home, school, day care, jail, mental institution, or similar institutional facility.]~~

~~[(c)] [Paragraph (a) of this subsection shall not apply to manufacturing and power generating facilities.]~~

Section 6. Incorporation by Reference.

(1) The "National Board Inspection Code Part 1, Installation"~~[,]~~2025~~[2015]~~ Edition, is incorporated by reference.

(2) The "National Board Inspection Code Part 2, Inspection" 2025 Edition, is incorporated by reference.

(3) The "National Board Inspection Code Part 3, Repairs and Alterations" 2025 Edition, is incorporated by reference.

(4) The "National Board Inspection Code Part 4, Pressure Relief Devices" 2025 Edition, is incorporated by reference.

(5) ~~[(2)]~~ The "Standard for Oil Burning Equipment NFPA 31," 2024 edition, is incorporated by reference.

(6) ~~[(3)]~~ The "Standard for Oil Burning Equipment NFPA 85," 2023 edition, is incorporated by reference.

(7) ~~[(2)]~~ This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Department of Housing, Buildings and Construction, Division of Plumbing, Boiler Section, 500 Mero Street, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m.

RAY A. PERRY, Secretary
JONATHAN M. FULLER, Commissioner

APPROVED BY AGENCY: April 9, 2026

FILED WITH LRC: April 10, 2026 at 12:00 p.m.

PUBLIC HEARING AND COMMENT PERIOD: A public hearing on this administrative regulation shall be held on June 23, 2026, at 9 a.m. eastern time, at 500 Mero Street, First Floor, Room 127CW, Frankfort, Kentucky 40601. Individuals interested in being heard at this hearing shall notify this agency in writing by five workdays prior to the hearing, of their intent to attend. If no notification of intent to attend the hearing was received by that date, the hearing may be cancelled. A transcript of the public hearing will not be made unless a written request for a transcript is made. If you do not wish to be heard at the public hearing, you may submit written comments on the proposed administrative regulation. Written comments shall be accepted through June 30, 2026 at 11:59 p.m. eastern time Send written notification of intent to be heard at the public hearing or written comments on the proposed administrative regulation to the contact person.

CONTACT PERSON: Jonathon M. Fuller, Commissioner, Department of Housing, Buildings and Construction, 500 Mero Street, 1st Floor, Frankfort, Kentucky 40601, Phone: (502) 782-0617, Fax: (502) 573-1057, Email: max.fuller@ky.gov

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Contact Person:Jonathon M. Fuller

Subject Headings:

(1) Provide a brief summary of:

(a) What this administrative regulation does:
This administrative regulation establishes the design, construction, and inspection criteria requirements of the boiler inspection section for all boilers and pressure vessels not exempted by KRS 236.060.

(b) The necessity of this administrative regulation:
This administrative regulation is necessary to establish the standards for the safe construction, installation, inspection, and repair of boilers, pressure vessels, and associated pressure piping.

(c) How this administrative regulation conforms to the content of the authorizing statutes:
KRS 236.030 authorizes the commissioner to promulgate administrative regulations that establish standards for the safe construction, installation, inspection, and repair of boilers, pressure vessels, and associated pressure piping. KRS 236.040 requires all boiler and pressure vessels to conform to the rules and regulations formulated by the commissioner, and establishes the standards for pressure piping and pressure vessels for human occupancy. KRS 236.110 establishes the inspection requirements for boilers, pressure vessels, and pressure piping.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes:
This administrative regulation establishes the standards for boilers and pressure vessels, and the requirements for the initial inspections of new boilers, new pressure vessels, and new pressure piping.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation:
This amendment updates code references, clarifies several topics (including, but not limited to: compliance with minimum standards, pressure piping inspection, and general boiler requirements) and adds provisions for carbon monoxide detection as well as chimney maintenance.

(b) The necessity of the amendment to this administrative regulation:
This amendment is necessary to update code references as well as ensure the safety of building occupants, boiler operators and inspectors.

(c) How the amendment conforms to the content of the authorizing statutes:
This amendment establishes the standards and installation of boiler and pressure vessels, and establishes the inspection requirements for boilers and pressure vessels.

(d) How the amendment will assist in the effective administration of the statutes:
This amendment updates the standards for boilers and pressure vessels and reorganizes and edits the administrative regulation for clarity and conciseness.

(3) Does this administrative regulation or amendment implement legislation from the previous five years?No.

(4) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation:

All individuals engaged in the boiler and pressure vessel industry, building owners, and Department of Housing, Buildings and Construction personnel.

(5) Provide an analysis of how the entities identified in question (4) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (4) will have to take to comply with this administrative regulation or amendment:

Regulated entities shall comply with the new codes and standards for the installation and construction of boilers.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (4):

The cost will vary based on the installation. For instance, some boilers are condensing boilers, which do not use masonry chimneys. Therefore, chimney inspection would not be required. Similarly, some boilers are mounted outdoors; therefore, carbon monoxide detection would not be required. A typical chimney inspection costs $300. This cost would be incurred every two to four years. To install and link a carbon monoxide detector to boilers costs approximately $1,000. This is a one-time cost.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (4):

The standards are more up-to-date and the administrative regulation will be easier to read and understand. Moreover, the carbon monoxide and emergency stop requirements will greatly enhance the safety of building occupants, as well as boiler operators and inspectors.

(6) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially:

There are no anticipated initial costs to administer this regulatory amendment.

(b) On a continuing basis:

There are no anticipated continuing costs to administer this regulatory amendment.

(7) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation or this amendment:

Any department costs of implementation will be met with existing department funds.

(8) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment:

This amendment will not necessitate an increase in fees or require funding from the department for implementation.

(9) State whether or not this administrative regulation establishes any fees or directly or indirectly increases any fees:

There are no fees increased by this amendment.

(10) TIERING: Is tiering applied?

Tiering is not applied as all individuals in the boiler and pressure vessel industry and department personnel are affected by this amendment.

FISCAL IMPACT STATEMENT

(1) Identify each state statute, federal statute, or federal regulation that requires or authorizes the action taken by the administrative regulation:

This regulation is authorized and required by KRS 236.030, 236.040, 236.110, 236.120, and 236.240.

(2) State whether this administrative regulation is expressly authorized by an act of the General Assembly, and if so, identify the act:

This regulation is required by KRS 236.030.

(3)(a) Identify the promulgating agency and any other affected state units, parts, or divisions:

The Department of Housing, Buildings and Construction, Division of Plumbing, Boiler Inspection Section.

(b) Estimate the following for each affected state unit, part, or division identified in (3)(a):

1. Expenditures:

For the first year:None

For subsequent years:None

2. Revenues:

For the first year:None

For subsequent years:None

3. Cost Savings:

For the first year:None

For subsequent years:None

(4)(a) Identify affected local entities (for example: cities, counties, fire departments, school districts):

There are no anticipated local entities that will be affected by this regulatory amendment. (b) Estimate the following for each affected state unit, part, or division identified in (4)(a):

(b) Estimate the following for each affected local entity identified in (4)(a):

1. Expenditures:

For the first year:None

For subsequent years:None

2. Revenues:

For the first year:None

For subsequent years:None

3. Cost Savings:

For the first year:None

For subsequent years:None

(5)(a) Identify any affected regulated entities not listed in (3)(a) or (4)(a):

Individuals engaged in the boiler and pressure vessel industry. (b) Estimate the following for each affected state unit, part, or division identified in (5)(a):

(b) Estimate the following for each regulated entity identified in (5)(a):

1. Expenditures:

For the first year:Expenditures will vary by type and scope of project. For example, if a boiler vents through a masonry chimney, the cost associated with a chimney inspection will be incurred (approximately $300). However, not all boilers are connected to a masonry chimney.

For subsequent years:Same as first year.

2. Revenues:

For the first year:Increased revenues for those performing the work, depending on type and scope of project and market rate.

For subsequent years:Same as first year.

3. Cost Savings:

For the first year:None

For subsequent years:None

(6) Provide a narrative to explain the following for each entity identified in (3)(a), (4)(a), and (5)(a)

(a) Fiscal impact of this administrative regulation:

The state will not have any revenue, cost savings or expenditures because enforcement will take place out of existing funds. Local governments also will not be affected. Boiler contractors may have additional expenditures and revenues. The precise amount of the expenditures and revenues will vary from project to project. For instance chimney inspection will not be required in all buildings as not all buildings have chimneys that serve boilers. Similarly, some boilers are mounted outdoors; therefore, carbon monoxide detection would not be required. A typical chimney inspection costs $300. This cost would be incurred every two to four years. To install and link a carbon monoxide detector to boilers costs approximately $1,000. This is a one-time cost.

(b) Methodology and resources used to reach this conclusion:

Please see the response to (5)(a). (7) Explain, as it related to the entities identified in (3)(a), (4)(a), and (5)(a):

(7) Explain, as it relates to the entities identified in (3)(a), (4)(a), and (5)(a):

(a) Whether this administrative regulation will have a "major economic impact", as defined by KRS 13A.010(14):

This regulation will not have a major economic impact as defined by KRS 13A.010(14).

(b) The methodology and resources used to reach this conclusion:

The total anticipated economic impact of this regulatory amendment is, for the most part, neutral. The increased costs incurred by contractors will be offset by revenues, the added upfront costs for building owners may help offset unanticipated costs affiliated with injury and death due to carbon monoxide poisoning, boiler or pressure vessel failure, or masonry chimney failure.