

481—390.5(89) Inspections.

390.5(1) General. All boilers and unfired steam pressure vessels covered by Iowa Code chapter 89 are inspected according to the requirements of the National Board Inspection Code (2021), which is hereby adopted by reference. A department inspector or special inspector must perform the inspections.

390.5(2) Schedule.

a. All required inspections must be performed according to the schedule set forth in Iowa Code section 89.3, unless an exception is set forth in this rule.

b. Except for inspections of unfired steam pressure vessels operating in excess of 15 pounds per square inch and low pressure steam boilers, each certificate inspection must be performed within a 60-day period prior to the expiration date of the operating certificate. Modification of this 60-day period will be permitted only upon written application showing just cause for waiver of the 60-day period.

c. Special inspections may be conducted when deemed necessary by the department and the object's owner or user.

390.5(3) Inspections conducted by special inspectors. Special inspectors shall provide copies of the completed report to the insured and to the department within 14 days of completing the inspection. The reports list all noteworthy conditions that are within the scope of Iowa Code chapter 89, all recommendations, and all requirements. If the special inspector has not provided the results of the inspection within the time frame identified, the department may conduct the inspection.

390.5(4) Type of inspection. The inspection will be an internal inspection when required; otherwise, it shall be as complete an external inspection as possible. Conditions including but not limited to the following may also be the basis for an internal inspection:

- a.* Visible metal or insulation discoloration due to excessive heat.
- b.* Visible distortion of any part of the pressure vessel.
- c.* Visible leakage from any pressure-containing boundary.
- d.* Any operating records or verbal reports of a vessel being subjected to pressure above the nameplate rating or to a temperature above or below the nameplate design temperature.
- e.* A suspected or known history of internal corrosion or erosion.
- f.* Evidence or knowledge of a vessel having been subjected to external heat from a fire.
- g.* A welded repair not documented as required.
- h.* Evidence of an accident, incident or malfunction that could affect or may have resulted from a problem with the object's integrity.

390.5(5) Internal inspections for unfired steam pressure vessels operating at more than 15 pounds per square inch. The director may require an internal inspection of an unfired steam pressure vessel operating in excess of 15 psi when an inspector observes any deviation from these rules, Iowa Code chapter 89, the construction code, the installation code, or the National Board Inspection Code.

390.5(6) Inspection of inaccessible parts. When, in the opinion of the inspector, as a result of conditions disclosed at the time of inspection, it is advisable to remove the interior or exterior lining, covering, or brickwork to expose certain parts of the vessel not normally visible, the owner or user shall remove such material to permit proper inspection and thickness measurement of any part of the vessel. Nondestructive examination is acceptable.

390.5(7) Imminent danger.

a. If the director determines that continued operation of an object constitutes an imminent danger that could seriously injure or cause death to any person, notice to immediately cease operation of that object shall be made to the owner or user through contact information available in the department's records or by posting a notice at the location of the object.

b. Upon such notice, the owner or user shall immediately take the necessary steps to cease operation of the object. All forms of energy to and from the object must be isolated and physically locked in the closed position.

c. A department inspector will verify that the object is no longer in operation and all forms of energy to and from the object have been isolated and are locked in the closed position.

d. The object shall not be used until all necessary repairs have been completed, the object has passed inspection, all repair documentation is complete, and the department reviews and approves the documentation.

390.5(8) *Internal inspections on a four-year cycle based on process safety management compliance.* The owner demonstrates compliance with the requirements set forth in Iowa Code section 89.3(5) “a”(4) “b” by annually submitting to the director a notarized affidavit. The affidavit shall be in a format approved by the director and signed by the owner or an officer of the company.

390.5(9) *Internal inspection on a four-year cycle for utility objects.* An object that meets the criteria of this subrule will be inspected internally at least once every four years and externally every year. If at any time the object or the owner no longer meets the criteria of this subrule, internal inspections will be performed on a two-year cycle.

a. The object is owned and operated by an electric public utility subject to rate regulation under Iowa Code chapter 476.

b. The object and the owner meet all the requirements for a two-year internal inspection interval.

c. If the object is shut down for a period sufficient to allow safe entry, and more than two years have passed since the last internal inspection, the owner shall notify the director of the outage and will schedule an internal inspection.

d. If the director determines that an earlier inspection is necessary, the owner shall prepare the object for inspection.

390.5(10) *Request for extended inspection interval.*

a. Owners of objects covered under Iowa Code section 89.3(4) “a” may apply for an extended internal inspection interval of up to seven years.

b. The application for an extended internal inspection interval includes the following information submitted to the director:

(1) The name and contact information of the requestor.

(2) The state identification number of the object.

(3) The interval requested with supporting reasons.

(4) An affidavit affirming the following:

1. Compliance with the process safety management standard contained in 29 CFR §1910.119.

2. The object is included as process safety management process equipment in the owner’s process safety management program.

3. The object meets the requirements contained in the National Board Inspection Code.

4. The object is fit for service based on the year of fabrication and the estimated service life of the object as determined by Part 2 of the National Board Inspection Code.

5. Practices have been implemented for managing consumable items and ancillary equipment of the object.

(5) The following supporting records:

1. Inspection records of the boiler and ancillary equipment for the prior five years.

2. The most recent Report of Fitness for Service Assessment.

3. Every Form R-1 Report of Repair and Form R-2 Report of Alterations for the prior five years.

(6) A request for an informal conference, if desired.

c. The director will consider, among other things, whether the object meets the requirements contained in the National Board Inspection Code, whether the object is fit for service based on the year of fabrication, the estimated service life of the object as determined by Part 2 of the National Board Inspection Code, and whether the owner has implemented practices for managing consumable items and ancillary equipment of the object.

d. The director may grant an extended inspection interval.

(1) An extended inspection interval lasts until the next inspection, at which time the owner of the object may again apply for an extension.

(2) The owner shall promptly report to the department’s boiler and pressure vessel unit any unscheduled shutdowns, significant incidents, near misses, and any other occurrences that might reasonably require reinspection before the extended date. Should the occurrence reasonably require it, or if any such

event is not reported within ten days of occurrence, the director may revoke the extended inspection interval.

e. If the director does not intend to grant the extension, the director will give the applicant a Notice of Intent to Deny Extended Inspection Interval, granting ten days for the applicant to provide additional reasons and evidence why the interval should be extended.

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