NEBRASKA ADMINISTRATIVE CODE

TITLE 229 - DEPARTMENT OF LABOR

CHAPTER 5 - FREQUENCY OF INSPECTIONS OF BOILERS AND PRESSURE VESSELS

001. This chapter is adopted pursuant to *Neb. Rev. Stat.* ' ' 48-726 and 48-727.

002. All jurisdictional boilers except hobby boilers, steam farm traction engines, portable and stationary show engines, and portable and stationary show boilers shall receive an annual certificate inspection. Hobby boilers, steam farm traction engines, portable and stationary show engines, and stationary and portable show boilers shall be inspected externally every two years and internally every four years.

A. Power boilers and high-pressure, high-temperature water boilers shall receive an internal inspection annually where construction permits; and an external inspection while in operation if possible; otherwise it shall be as complete an inspection as possible.

B. With the chief boiler inspector's approval, a power boiler and high-pressure, high-temperature water boilers which have internal continuous water treatment under the direct supervision of a graduate chemical engineer or a person having a minimum of five years supervisory experience and formal training in the treatment of boiler water, shall receive an external inspection annually while in operation and an internal inspection every two years. Accurate records of boiler water chemistry shall be kept and made available for review by the inspector.

C. With the chief boiler inspector's approval, a waste heat boiler which has internal continuous water treatment under the direct supervision of a graduate chemical engineer or a person having a minimum of five years of supervisory experience and formal training in the treatment of boiler water, shall receive an external inspection annually while in operation and an internal inspection every two years. Accurate records of boiler water chemistry shall be kept and made available for review by the inspector.

D. Low pressure boilers shall be inspected as follows:

(1) Steam or vapor boilers shall receive an external inspection annually and an internal inspection every two years where construction permits. With the chief inspectors approval, steam or vapor boilers which have internal continuous water treatment under the direct supervision of a graduate chemical engineer or a person having a minimum of five years supervisory experience and formal training in the treatment of boiler water, shall receive an external inspection annually while in operation and an internal inspection every four years. Accurate records of boiler water chemistry shall be kept and made available for review by the inspector.

(2) Water heaters, hot water heating boilers, and hot water supply boilers shall receive an external inspection annually. Where construction permits, units stamped with the ASME AHLW@ code symbol stamp shall receive an internal inspection every five (5) years from the date of manufacturer=s completion. Boilers stamped with the ASME AH@ code symbol stamp shall receive an internal inspection every four (4) years from the date of manufacturer=s completion. Existing units that are not ASME code symbol stamped but are listed as meeting ANSI Z21.10.~~1~~3 shall receive an internal inspection every five years and units listed as meeting ANSI Z21.13 shall receive an internal inspection every four years.

E. An external inspection shall be made on any ~~boiler or hot water heater~~ object for which ~~that has~~ an internal inspection is required every ~~frequency of~~ twelve (12) months. Such external inspection shall be conducted within six (6) months ~~after~~ of the date of the internal inspection ~~has been conducted~~. Th~~is~~e external inspection sh~~ould~~all be performed while the unit is under normal operating conditions or under normal system pressure. Units that are stamped with the ASME “M” Symbol Stamp (miniature boilers) are exempt from this requirement.

F. Units that are filled with a glycol mixture or another type of heat transfer fluid, other than water, do not require an internal inspection, unless, upon review of the chemical concentration and operating records, the inspector believes that a problem exists, and requests that the unit be opened for an internal inspection. If the unit is drained for maintenance purposes or for the repair of the pressure parts, an internal inspection shall be performed prior to refilling the unit.

003. A. Except as provided in subsection (C) and (D) of this section and '005 of this chapter, unfired pressure vessels subject to internal corrosion shall be inspected internally and externally every two years.

B. Except as provided in subsections (C) and (D) of this section and '005 of this chapter, pressure vessels not subject to corrosion shall receive an external inspection every two years.

C. Except as provided in subsection (D) of this section and '005 of this chapter, pressure vessels subject to internal corrosion or which contain hazardous or lethal fluids shall receive an internal inspection biennially where construction permits. Alternatively, meaningful and appropriate NDE may be performed at the inspector's discretion to determine the rate of deterioration. For those vessels whose deterioration rate has been determined, at the inspector=s discretion, and with the approval of the Commissioner, the requirement for a biennial internal inspection may be extended, but in no case shall this period exceed 5 years. Pressure vessels not subject to internal corrosion shall be inspected internally, where construction permits, every 5 years. If the opening of the pressure vessel would damage internal catalysts or other devices, the inspector may, with the permission of the Commissioner, defer the internal inspection until the next date that the catalyst or other internal device is repaired or replaced, provided that no pressure vessel shall

go more than fifteen years without an internal inspection.

D. Unfired pressure vessels under the supervision of an owner-user inspection organization shall be inspected at intervals required by these regulations and the National Board Inspection Code, or API-510, as applicable.

004. A. Where, in the opinion of the inspector, as the result of condition disclosed at the time of inspection, it may be necessary to remove 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 to determine remaining thickness.

B. If, upon an 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.

C. Record keeping available for review showing:

(1) The date and time the boiler or pressure vessel is out of service and the reason therefore.

(2) Daily analysis of water samples that adequately shows the conditions of the water and elements or characteristics which are capable of producing corrosion or other deterioration to the boiler or its parts.

D. External inspections may be performed by the inspector during reasonable hours and without prior notification.

E. 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 such instances, the owner or user shall prepare the boiler or pressure vessel for such inspections or tests as the inspector may designate.

005. A. An owner or user of an unfired pressure vessel may apply for a waiver of inspection of unfired pressure vessels owned or used by such owner or user.

B. Such application shall be accompanied by a registration fee of $50.00 plus $30.00 per pressure vessel for which a waiver is sought, except that in the event that such pressure vessel has a current certificate of inspection on file with the chief inspector, no additional fee shall be required.

C. The commissioner may issue such a waiver upon a finding that:

(1) (a) the owner or user is an owner-user inspection organization,

(b) the pressure vessel will be inspected by an owner-user inspection organization in accordance with the National Board Inspection Code

or API-510 as may be applicable, and

(c) all repairs on the pressure vessels for which a waiver is sought will be made in accordance with the National Board Inspection Code or API-510 as may be applicable; or

(2) upon a finding that nationally recognized inspection standards other than the National Board Inspection Code or API-510 are utilized in regard to said pressure vessels, so long as said national standards require that periodic inspection and maintenance of the pressure vessels in a manner which will protect the public safety to a degree substantially similar to that provided under the National Board Inspection Code or API-510.

D. Any organization applying for a waiver of inspection shall maintain records of inspections and repairs of pressure vessels for which a waiver is sought.

E. The owner-user shall notify the chief inspector of any pressure vessels that have been purchased, sold, destroyed or removed from any further use by the owner-user.

F. The owner-user shall be subject to periodic audit by the chief inspector to ensure compliance with the Act and this title.

G. The chief inspector may revoke a waiver of inspection for all pressure vessels owned or used by an owner or user upon a finding that the owner-user has failed to inspect and repair such pressure vessels in accordance with the requirements of this title or to keep records sufficient to establish that said inspections and repairs were performed in accordance with this title.

H. The chief inspector may revoke the waiver of inspection for all pressure vessels owned or used by an owner or user upon a finding that the owner-user has repeatedly failed to register new or used jurisdictional pressure vessels purchased or brought into the state of Nebraska or to notify the chief inspector of pressure vessels which have been sold, destroyed or removed from any further use by the owner-user.

006. Inspections shall be conducted in accordance with the requirements of these rules, the Nebraska Boiler Inspection Program Jurisdictional Inspection Policy BIP-002, and the requirements of Part RB of the National Board Inspection Code.

007. All personnel conducting internal inspections where entry into a boiler or pressure vessel is classified as entry into a confined space by OSHA 1910.146 shall follow the requirements outlined in OSHA 1910.146, the specific plant site confined space program and or the employer's confined space program, for entry into the boiler or pressure vessel.