NEBRASKA ADMINISTRATIVE CODE

TITLE 229 - DEPARTMENT OF LABOR

CHAPTER 23 - MINIATURE BOILERS - EXISTING INSTALLATIONS

001. This chapter is adopted pursuant to Neb. Rev. Stat. §48-727.

002. The maximum allowed working pressure in accordance with the ASME code, is 100 psi.

003. Each miniature boiler shall be equipped with a sealed spring-loaded pop safety valve of not less than one-half inch NPS. The minimum relieving capacity of the safety valve shall be determined in accordance with ASME code. In addition to these requirements, the safety valve shall have sufficient capacity to discharge all the steam that can be generated by the boiler without allowing the pressure to rise more than six percent above maximum allowable working pressure.

004. Each steam line from a miniature boiler shall be provided with a stop valve located as close to the boiler shell or drum as is practicable, except when the boiler and steam receiver are operated as a closed system.

005. Miniature boilers for operation with a definite water level shall be equipped with a glass water gage for determining the water level. The lowest permissible water level for vertical boilers shall be at a point one-third of the height of the shell above the bottom head or tube sheet.

006. Where the boiler is equipped with an internal furnace, the water level shall not be less than one-third of the length of the tubes above the top of the furnace tube sheet.

007. In the case of small boilers operated in a closed system where there is insufficient space for the usual glass water gage, water level indicators of the glass bull's eye type may be used.

008. Miniature boilers shall have the lowest visible part of the water gage glass located at least one inch above the lowest possible permissible water level specified by the manufacturer.

009. Miniature boilers shall be provided with at least one feed pump or other feeding device, except where it is connected to a water main carrying sufficient pressure to feed the boiler or where it is operated with no extraction of steam (closed system). In the latter case, in lieu of a feeding device, a suitable connection or opening shall be provided to fill the boiler when cold. Such connection shall be no less than one-half inch NPS for iron or steel pipe and one-fourth inch for brass or copper pipe.

010. The feed pipe shall be provided with a check valve and a stop valve of a size not less than that of the pipe. The feedwater may be delivered through the blowoff opening if desired.

011. Miniature boilers shall be equipped with a blowoff connection, not less than one-half inch NPS, located to drain from the lowest water space practicable. The blowoff piping shall be equipped with a stop valve not less than one-half inch NPS.

012. Miniature boilers exceeding twelve inches internal diameter or having more than ten square feet of heating surface shall be fitted with not less than three (3) brass washout plugs of one-inch NPS which shall be screwed into openings in the shall near the bottom. In miniature boilers of the closed type system heated by removable internal electric heating elements, the openings for these elements when suitable for cleaning purposes may be substituted for washout openings.

013. Boilers not exceeding twelve inches internal diameter and having less than ten square feet of heating surface need not have more than two (2) one-inch openings for clean-outs, one of which may be used for the attachment of the blow-off valve. These openings shall be opposite to each other where possible.

014. All threaded openings shall be opposite to each other where possible.

015. All threaded openings in the boiler shall be provided with a riveted or welded reinforcement to give four (4) full threads therein.

016. Electric boilers of a design employing a removable top cover flange for inspection and cleaning need not be fitted with washout openings.

017. All valves, pipe fitting, and appliances connected to a miniature boiler shall be equal to at least the requirements of the American National Standards Institute for one hundred twenty-five pounds rating and conform to the general requirements as listed in the ASME code.

018. All repairs and alterations to miniature boilers must comply with the rules as defined in 229 NAC 15.