**Section 215.55 Safety Relief Devices**

a) Every container used in systems covered by Sections 215.85, 215.110, and 215.115 without permanent supply piping to another source of excess pressure shall be protected from excess pressure by one or more pressure relief valves of the spring loaded type conforming with applicable requirements of ASME UG-125(c)(3), UL-132 or other equivalent pressure relief valve standard.

b) Pressure relief valves shall be in direct communication with the vapor space of the container. All pressure relief discharge openings shall have suitable rain caps that will allow free discharge of the vapor and prevent the entrance of water. Provision shall be made for draining condensate that may accumulate.

c) The discharge from pressure relief valves shall be vented away from the container, upward and unobstructed to the atmosphere.

d) Container relief device pressure shall be set to discharge at no more than 125% maximum allowable working pressure for containers built by the 1949 ASME Code Sections U-68 and U-69, and no more than 100% for those built by all subsequent ASME Codes. Set pressure tolerance is +10% to 0% for non-refrigerated containers.

e) Pressure relief valves used on containers covered by Sections 215.85, 215.110 and 215.115 shall be constructed to discharge at not less than the rates required in Appendix B before the pressure is in excess of 121% of the maximum allowable working pressure of the container. Relief protection for any other reason shall use ASME UG-125 through UG-136.

f) Pressure relief valves shall be so arranged that the possibility of tampering will be minimized. If the pressure setting adjustment is external, the relief valves shall be provided with means for sealing the adjustment.

g) Shutoff valves shall not be installed between the pressure relief valves and the containers or systems covered by Sections 215.85, 215.110 and 215.115.

h) Relief valves shall be installed in a manifold that has a required rate of discharge and so installed to allow either of the pressure relief valves to be closed off but does not allow both pressure relief valves to be closed off at the same time, or other suitable device so that they can be replaced while the container remains pressurized. Containers designed with internal pressure relief systems are exempt from this requirement.

i) Each pressure relief valve used with systems covered by Sections 215.85, 215.110 and 215.115 shall be plainly and permanently marked as follows:

1) With the letters "AA" or the symbol "NH3";

2) The pressure in psig at which the valve is set to start-to-discharge;

3) The rate of discharge of the valve in cubic feet per minute of air at 60°F and atmospheric pressure;

4) Year of manufacture; and

5) The manufacturer’s name and catalog number.

j) Piping or connections on either the upstream or downstream side shall not restrict the flow capacity of the relief valve.

k) The manufacturer or supplier of a pressure relief valve manifold shall publish complete data showing the flow rating through the combined assembly of the manifold with pressure relief valves installed. The manifold flow rating shall be determined by testing the manifold with all but one valve discharging. If one or more openings have restrictions not present in the remaining openings, the restricted opening or openings, or those having the lowest flow, shall be used to establish the flow rate marked on the manifold nameplate. The marking shall be similar to that required in Section 215.55 for individual valves.

l) A hydrostatic relief valve, venting into the atmosphere at a safe location, shall be installed in each section of piping (including hose) in which liquid can be isolated between shutoff valves to relieve pressure that could develop from the trapped liquid. If an equivalent pressure relieving device is used, the maximum accumulative pressure possible within the system shall not exceed the limits of the system.

m) The discharge opening from any pressure relief valve shall not terminate inside any building or below the highest roof line of the building.

n) A pressure relief device shall be subject to a systematic, periodic, visual external inspection at least annually to determine that it:

1) Meets the applicable requirements specified in this Section;

2) Is free of evidence of tampering, damage, corrosion or foreign matter that might prevent proper operation;

3) Is free of leakage when subject to pressures below the minimum allowable start-to-discharge setting;

4) Has a properly installed rain cap or other device to avoid entry of moisture or other matter into the relief valve outlet; and

5) Has an open weep hole to permit moisture to escape.

o) Any deficiency as may be found in subsection (n) shall require immediate corrective action, replacement or repair of the pressure relief device as may be appropriate.

p) No container pressure relief device shall be used over 5 years past the manufactured date. Records shall be maintained that identify each container and indicate the date of installation for the pressure relief devices. If no date is specified, a pressure relief valve shall be replaced no later than five years following the date of its manufacture or last repair unless it has first been disassembled, inspected, repaired and tested by the manufacturer, or by a qualified repair organization, in a manner such that the valve's condition and performance is certified as being equivalent to the standards for the original valve. The data regarding repairs or reassembly shall be indicated by stamping the body or attaching a tag pertaining to the valve with the month and year to replace or recertify. All facilities shall be in compliance with this subsection no later than December 31, 2020.

(Source: Amended at 40 Ill. Reg. 8704, effective July 1, 2016)