

## WATER TANKS FOR PRIVATE FIRE PROTECTION

Rules for the Construction of Unfired Pressure Vessels, Section VIII, Division 1, Unfired Pressure Vessels of the ASME Boiler and Pressure Vessel Code (See Appendix C). This code permits the fusion process of welding with certain regulations for strength, qualification of welders, and tests.

## 3-1.6.2 Tests

- (a) Each pressure tank shall be given the tests specified by the ASME Rules before painting, except that the hydrostatic test pressure shall in no case be less than 150 pounds per square inch (10.3 bars).
- (b) In addition to the ASM tests, each pressure tank shall be filled two-thirds full and tested at the normal working pressure with all valves closed, and shall not lose more than one-half pound per square inch (0.03 bars) pressure in 24 hours.
- (c) A certificate signed by the manufacturer shall be filed with the authority having jurisdiction, certifying that the foregoing tests have been made.
- (d) A repetition of the above *tests* may be required after the tank has been set in place and connected. In all cases where conditions do not permit shipping the tank assembled, the above tests shall be conducted after erection in the presence of a representative of the authority having jurisdiction.
- **3-1.6.3 Supports.** The supports shall be steel or reinforced concrete, located so as to prevent sagging or vibration, and to properly distribute the loads due to the weight of the vessel completely full of water. Stresses in steel supports shall not exceed those permitted by Section 7-4 for steel towers. For horizontal tanks there shall be at least one support near each end of the tank and these supports so located that combined stresses in any part of the tank shall not exceed those specified in 3-1.6.1.
- **3-1.6.4 Painting.** Tanks shall be thoroughly cleaned by scraping, wire brushing, and wiping, and shall be painted inside and outside with at least two complete coats of an approved metal protective paint. One of the stamps required by the *ASME Specifications for Material* and also one of the *ASME Standard Pressure Vessel* stamps shall not be rendered illegible.
- **3-1.7 Care and Maintenance.** The interior of pressure tanks shall be inspected carefully at three-year intervals to determine if corrosion is taking place and if repainting or repairing is needed. When necessary, they shall be thoroughly scraped and wire brushed and repainted with an approved metal-protective paint. Each relief valve shall be tested at least once each month.