

Code vs Non-Code Pressure Vessels

Code Pressure Vessels

- Built to the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code which has been incorporated into the pressure vessel laws of most states. "When required" may vary from state to state.
- ASME designs are built with a safety factor of 3.5-to-1. The Code safety factor was changed in 1999* from 4-to-1 to the current 3.5-to-1.
- All materials used to build the pressure vessel envelope must be documented to meet Code requirements as specified in ASME Section VIII (Division 1) and Section II. As a result, fittings are generally 3000-lb design since no manufacturer provides the required documentation on their 150-lb items.
- All persons who weld on the pressure vessel envelope have been qualified in accordance with ASME Section IX.
- The design is reviewed by a 3rd-party inspector who also inspects the tank and observes the 130% hydrostatic test. The 3rd-party inspector's participation is documented by signature on (1) the "traveler" (work progress checklist) and (2) the Manufacturer's Data Report (Form U-1).
- A nameplate is attached indicating manufacturer, design parameters, and serial number.

* The ASME Boiler and Pressure Vessel Code Section VIII, Division 1, 1999 Addenda

Non-Code Pressure Vessels

- Built to a safety factor of 3-to-1.
- Pressure vessel envelope materials include standard 150-lb boiler fittings.
- Pressure vessels are built using standard fabrication methods by persons experienced in pressure vessel fabrication.
- A nameplate may be attached indicating manufacturer, and serial number.