

DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety & Health
Pressure Vessel Unit
1515 Clay Street, Suite 1302
Oakland CA 94612-1402
Tel: (510) 622-3052 Fax: (510) 622-3063



Circular Letter PV-2006-4

Effective Date October 1, 2006

Subject: STANDARD FOR ACCEPTANCE OF NON-CODE BOILERS AND PRESSURE VESSELS

To: All Parties Involved in the Use of Boilers and Pressure Vessels in Places of Employment

Boilers and pressure vessels to be installed in a place to employment in California must either be constructed and stamped in accordance with the rules of the applicable American Society of Mechanical Engineers (ASME) Code, or be proven to the Division to provide equivalent safety.

Requirements for design, construction, inspection and installation of boilers and pressure vessels are contained in the California Code of Regulations, Title 8.

It is the responsibility of the employer to request written permission from the State of California, Department of Industrial Relations, Division of Occupational Safety and Health, Pressure Vessel Unit to use such non-code boiler or pressure vessel, if installed in a place of employment.

When making a request to use non-code boilers or pressure vessels, the employer shall submit the following documentation as applicable in the English language and units:

1. A list of all existing or proposed design and service conditions, including:

Maximum allowable working pressure and temperature, internal and external loading, corrosion and erosion allowance, heat treatment, special service requirements or service restrictions, etc.

Design, materials, construction, inspection, testing, non-destructive examination and certification shall be based on requirements from the applicable ASME Code Section, as follows:

- a. Power Boilers, Section I
- b. Materials Specifications, Section II
- c. Nuclear Power Plant Components, Section III, Division 1 and 2
- d. Heating Boilers, Section IV
- e. Non-Destructive Examination, Section V
- f. Pressure Vessels, Section VIII, Division 1 and 2
- g. Welding and Brazing Qualifications, Section IX
- h. Fiberglass-Reinforced Plastic Pressure Vessels, Section X
- i. Power Piping, ASME B31.1
- j. Safety Standard for Pressure Vessels for Human Occupancy, ASME PVHO-1.



If the design was not based on ASME Code rules, provide a copy of the design rules used and show how they are equivalent.

2. A complete set of design drawings showing construction and weld joint details including internal and external attachments.
3. The original code of construction shall be used to establish the allowable stresses and joint efficiencies when calculating the maximum allowable working pressure of a vessel.
4. A list of all pressure boundary materials or those materials subject to stress due to pressure and attachments including material thickness. This list shall include the material specification and should conform to the applicable Code specification. If the material is of a specification other than referenced in the applicable ASME Code section, submit a copy and indicate how it is considered equivalent. The stress values used in all design calculations shall not exceed the maximum allowable stress values permitted for materials in the applicable Code section.
5. Documentation of any original mill identification and location of such identification.
6. Manufacturers material test reports and/or material traceability including reports of any tests required by the applicable Code section.
7. Welding or brazing procedure specifications and welder or brazer performance qualification records.
8. Non-destructive examination procedures and results or examinations.
9. Record of pressure test or proof test.
10. Documentation showing that the quality control or quality assurance program used by the Manufacturer is equivalent to that required by the ASME Code.
11. Identification to the Inspection Agency whose personnel performed inspections and certified the Manufacturer's Data Report or equivalent certification.
12. Evidence of qualification or certification of the Inspection Agency by a Jurisdictional Authority.
13. Certification by the Inspection Agency that all inspectors making inspections of the vessel meet the qualifications required by the Jurisdictional Authority. The individual names and commission numbers, if any, shall be provided. The system of supervisory control of such inspectors shall be included.
14. Documentation of inspection during fabrication by the Manufacturer and the Inspection Agency.



- 15.A report of internal and external inspection by a Certified Inspector employed by the Division.
- 16.A facsimile of the Manufacturers nameplate or stamping.
- 17.Manufacturer's Data Report or equivalent document certified by the Manufacturer and the Inspector employed by the Inspection Agency.
- 18.A copy of any code or standard used for design or construction.

For boilers or pressure vessels that have been in service, additional tests or examinations may be required including a report of ultrasonic examination that lists the thickness of all pressure containing materials and the location of such measurements.

When the above information is received, it will be reviewed to determine if the boiler or pressure vessel can be accepted as meeting the requirements of the Safety Orders.

A Certified Inspector employed by the Division shall inspect the boiler or pressure vessel at the place of installation to verify that the above requirements have been complied with and to verify identification.

Charges will be made for the review and inspections conducted by Division personnel per California Code or Regulations, Title 8, Division I, Chapter 3.2 (CAL/OSHA) Article 5 Section 344.

It is the employers responsibility to demonstrate that the non-code boilers and pressure vessels are built and will be installed and operated in compliance with the Safety Orders administered by the Division and in accordance with the Manufacturer's installation and operational instructions.

Reference: California Code of Regulations, Title 8
Chapter 4 Division of Industrial Safety
Subchapter 1 Unfired Pressure Vessel Safety Orders
Subchapter 2 Boiler and Fired Pressure Vessels Safety Orders

Sincerely,

Original signed by Donald C. Cook

Donald C. Cook
Principal Safety Engineer