



PROCESS
INDUSTRY
PRACTICES

TECHNICAL REVISION
May 2022

Vessel

**PIP VESLP001
Low-Pressure,
Welded Vessel Specification**

Currently in preview, click buy full version

PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by the Practice.

This Practice is subject to revision at any time.

© Process Industry Practices (PIP), Construction Industry Institute, The University of Texas at Austin, 3925 West Braker Lane (R4500), Austin, Texas 78759. PIP Member Companies and Subscribers may copy this Practice for their internal use. Changes or modifications of any kind are not permitted within any PIP Practice without the express written authorization of PIP. Authorized Users may attach addenda or overlays to clearly indicate modifications or exceptions to specific sections of PIP Practices. Authorized Users may provide their clients, suppliers and contractors with copies of the Practice solely for Authorized Users' purposes. These purposes include but are not limited to the procurement process (e.g., as attachments to requests for quotation/ purchase orders or requests for proposals/contracts) and preparation and issue of design engineering deliverables for use on a specific project by Authorized User's client. PIP's copyright notices must be clearly indicated and unequivocally incorporated in documents where an Authorized User desires to provide any third party with copies of the Practice.

PUBLISHING HISTORY

March 2004	Issued	May 2022	Technical Revision
September 2017	Technical Revision		
June 2012	Complete Revision		

Not printed with State funds



PIP VESLP001 Low-Pressure, Welded Vessel Specification

Table of Contents

1. Scope	2
2. References	2
2.1 Process Industry Practices	2
2.2 Industry Codes and Standards	3
2.3 Other References	3
3. Definitions	4
4. Requirements	4
4.1 General	4
4.2 Design	5
4.3 Materials	13
4.4 Fabrication	13
4.5 Pressure Testing	16
4.6 Manufacturer's Nameplate	18
4.7 Shipping Preparation	19
4.8 Documentation	19

1. Scope

This Practice provides requirements for the construction of low-pressure, welded vessels that in general meet the philosophy and requirements of Section VIII, Division 1 of the *ASME Boiler and Pressure Vessel Code (Code)*, but do not require *Code* inspection or stamping. Vessels may be shop or field fabricated.

This Practice describes the basic requirements for the design, materials, fabrication, examination, inspection, and testing of aboveground, welded, cylindrical shell, single-wall vessels having a nameplate with an internal and external Design Pressure not greater than 103 kPa (15 psig) at the top of the vessel in the normal operating position. An additional specification may be required to define options covered herein and other specific requirements considering service (startup, normal operation, upset, shutdown), location, maintenance, etc. The documents listed in Section 2.1 shall be used for a complete purchase specification.

This Practice is not intended for flat-bottom tanks or API-type field-erected storage tanks. Unless approved by Purchaser, this Practice is not to be used for low-pressure vessels that will contain "Lethal Substances" as defined in *Code* Endnote 64.

2. References

Applicable parts of the following Practices, industry codes and standards, and other references are an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP VECV1001 - *Design Criteria and Purchasing Requirements for Vessels ASME Code Section VIII, Divisions 1 and 2*
- PIP VEDV1003 - *Documentation Requirements for Vessels ASME Code Section VIII, Divisions 1 and 2*
- PIP VEEVJ001 - *Lasket Guidelines*
- PIP VEFV1100/M - *Vessel/S&T Heat Exchanger Standard Details*
 - PIP VEFV1101/M - *Vessel Nameplate Bracket*
 - PIP VEFV1102/M - *Vessel Tolerances*
 - PIP VEFV1103/M - *Vessel Grounding Lug*
 - PIP VEFV1105/M - *Horizontal Vessel Saddles Supported on Concrete*
 - PIP VEFV1106/M - *Horizontal Vessel Saddles Supported on Structural Steel*
 - PIP VEFV1111/M - *Vertical Vessel Beam Type Leg Supports*
 - PIP VEFV1112/M - *Vertical Vessel Angle Type Leg Supports without Pad*
 - PIP VEFV1113/M - *Vertical Vessel Angle Type Leg Supports with Reinforcement Pad*
 - PIP VEFV1117/M - *Vessel Vertical Manway Davits*
 - PIP VEFV1118/M - *Vessel Horizontal Manway Davits*
 - PIP VEFV1134/M - *Skirt Openings Vertical Vessels*