



PROCESS  
INDUSTRY  
PRACTICES

TECHNICAL REVISION  
*December 2018*

***Pipeline Systems***

**PIP PLC00005  
Design of ASME B31.8  
Metallic Pipeline Systems within facilities**

---

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 (74500), 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**

August 2016      *Issued*  
December 2018    *Technical Revision*

Not printed with State funds



**PIP PLC00005  
Design of ASME B31.3  
Metallic Pipeline Systems within Facilities**

---

**Table of Contents**

**1. Scope ..... 2**

**2. References ..... 2**

2.1 Process Industry Practices ..... 2

2.2 Industry Codes and Standards ..... 2

2.3 Government Regulations ..... 2

**3. Requirements ..... 3**

3.1 General ..... 3

3.2 Design Conditions ..... 4

3.3 Design Practices ..... 5

3.4 Hot Tapping ..... 12

3.5 Piping Components ..... 12

3.6 Piping Flexibility ..... 16

3.7 Piping Support ..... 17

3.8 Specific Piping Systems ..... 17

3.9 Fabrication, Assembly, and  
Erection ..... 17