



PROCESS
INDUSTRY
PRACTICES

COMPLETE REVISION
April 2024

Pipeline Systems

PIP PLE00012
Piping Examination and Leak Testing Guide -
B31.8 Pipelines

PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

This Practice has been prepared by harmonizing technical requirements from existing standards of major industrial operators, contractors, and standards development organizations. While this Practice is intended to incorporate the majority of requirements, individual applications may have requirements which take precedence over this Practice. Determinations concerning fitness for purpose or application of this Practice to specific project or engineering situations should not be made solely on information contained in this Practice. All Practices are intended to be consistent with applicable laws and regulations. Should this Practice conflict with 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 this Practice.

Use of trade names should not be viewed as an expression of preference. Other brands having the same specifications are equally correct and may be substituted for those named.

This Practice is subject to revision at any time. For more information refer to PIP ADG001, *Specification for Developing Practices*.

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Table of Contents

1. Scope	2
2. References	2
2.1 Process Industry Practices.....	2
2.2 Industry Codes and Standards.....	2
3. Definitions	3
4. General	3
5. Scope of Examination	3
6. Examination Selection Basis	4
7. Testing Selection Basis	5
8. Test Methods	5
8.1 Hydrostatic Test.....	5
8.2 Pneumatic Test.....	5
8.3 Project Special Test.....	6
9. Test Pressure	6
10. Pre-Test Procedures	6

1. Scope

This Practice describes guidelines for specifying requirements for examination and leak testing of metallic pipeline systems designed in accordance with *ASME B31.8 Gas Transmission and Distribution Piping Systems*. This Practice provides guidelines for specifying requirements for examination of piping materials, components, fabrication, assembly, installation, and associated documentation. This Practice provides guidelines for the extent of examination, criteria for acceptance, and correction of defective work. This Practice describes the types of leak tests, basis for selecting the appropriate tests, and arrangements for testing piping.

2. References

Applicable parts of the following Practices and industry codes and standards, including codes referenced therein, shall be considered 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 PLC00002 - *Abbreviated Pipeline Terms and Acronyms*
- PIP PLCM0001 - *Pipeline Systems Nomenclature*
- PIP PLSC0001 - *Fabrication and Examination of ASME B31.8 Metallic Piping*
- PIP PLSC0021 - *Leak Testing of Piping Systems*

2.2 Industry Codes and Standards

- American Petroleum Institute (API)
 - API 1110 - *Recommended Practice for the Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids, or Carbon Dioxide*
- American Society of Mechanical Engineers (ASME)
 - ASME B16.5 - *Pipe Flanges and Flanged Fittings*
 - ASME B31.3 - *Process Piping*
 - ASME B31.8 - *Gas Transmission and Distribution Piping Systems*
 - ASME PCC-2 - *Repair of Pressure Equipment and Piping*
- Pipeline Research Council International (PRCI)
 - *Pipeline Repair Manual, Contract PR-186-0324*
- U.S. Department of Transportation
 - Code of Federal Regulations (CFR) 49 Part 192 - *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards Part J Test Requirements*