



PROCESS
INDUSTRY
PRACTICES

January 2024

Insulation

PIP INEG3000
Guideline for Insulation Inspection and
Maintenance Practices

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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1. Scope

This Practice provides guidance to users for the inspection and maintenance of thermal insulation systems.

2. References

Applicable parts of the following Practices and industry codes and standards 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 INSA1001 - *Various Acoustic Insulation Configurations*
- PIP INSA1002 - *Piping-Layer Staggering and Overlapping of Absorptive Barrier*
- PIP INSA1003 - *Piping-Sheet and Mastic Barrier Layer Attachment*
- PIP INSA1004 - *General Arrangement – Piping Insulation*
- PIP INSA1005 - *Piping-Flange Insulation*
- PIP INSA1006 - *Valves without Extended Bonnets*
- PIP INSC1000 - *Requirements for Cold Service Insulation Materials*
- PIP INSH1000 - *Hot Service Insulation Materials and Installation Specification*
- PIP INTG1000 - *Insulation Inspection Checklist*

2.2 Industry Codes and Standards

- API - American Petroleum Institute
 - API 510 - *Pressure Vessel Inspection Code*
 - API 570 - *Piping Inspection Code*
 - API 574 - *Inspection Practices for Piping System Components*
 - API 581 - *Risk-Based Inspection Technology*
 - API 583 - *Corrosion Under Insulation and Fireproofing*
 - API 653 - *Tank Inspection*
- CINI - Committee Industrial Insulation
 - CINI Manual Section 1.3.05 - *Quality Control of Insulation Systems*
- FESI - European Federation of Associations of Insulation Contractors
 - FESI TTC-02 - *Guide to Good Thermal Insulation Practice*
- MICA - Midwest Insulation Contractors Association
 - *MICA Standards Manual*

2.3 Other References

- API 510 - *Pressure Vessel Inspection Code* - This inspection code covers the in-service inspection, repair, alteration, and rerating activities for pressure vessels and the pressure-relieving devices (PRDs) protecting these vessels.