PROCESS INDUSTRY PRACTICES

COMPLETE REVISION
October 2024

Electrical

PIP ELTFT01
Electrical Equipment and Systems
Field Inspection, Testing, and Commissioning

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 describes the minimum requirements for inspection, testing, and commissioning procedures for electrical equipment and systems after installation. This Practice provides minimum acceptable values for the testing results and forms for recording inspection and test values.

Certain equipment is application-specific, and the testing of such equipment may not be covered by this Practice.

Some inspections, tests, and commissioning may require an independent testing organization or an equipment manufacturer's representative. This Practice does not specify which activities require a third party or designate responsibility for obtaining and coordinating these third parties. These activities, if required, shall be defined in the project scope.

This Practice does not cover full compliance inspections required by various codes and regulations but does provide assurance of equipment integrity, safety, and compliance with project-specific documents.

2. References

Applicable parts of the following 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.

Industry Codes and Standards

- International Electrical Testing Association (NETA)
  - ANSI/NETA ATS - *Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems (NETA ATS)*
  - ANSI/NETA ECS - *Standard for Electrical Commissioning Specifications for Electrical Power Equipment and Systems*
  - ANSI/NETA ETT - *Standard for Certification of Electrical Testing Technicians*

3. Definitions

commissioner: Party responsible for placing into service newly installed or retrofitted electrical equipment and electrical facilities as defined in the project scope

owner: Party who owns the facility where the inspections, testing, and commissioning services will be performed

owner's authorized representative: An owner's appointed engineer, inspector, electrical supervisor, electrical designer, or other knowledgeable electrical person authorized to make certain decisions or witness and sign test sheets, or other designated tasks

owner's AHJ (Authority Having Jurisdiction): Designated site electrical engineer. This person has the responsibilities as defined in *NFPA 70* for the facility and will coordinate any activities with the federal, state, local, or regional AHJ. Where approval is required by the owner's AHJ, as indicated in this Practice, that approval shall be documented.