PROCESS INDUSTRY PRACTICES

September 2020

Electrical

PIP ELSSG13G
Design and Fabrication of Medium-Voltage Gas-Insulated Switchgear above 1000 V up to 52kV (IEC)

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.

PUBLISHING HISTORY

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Table of Contents

Data Form

PIP ELSSG13G-D – Data Sheet for Medium-Voltage Gas Insulated Switchgear above 1000 V up to 52kV (IEC)

1. Scope

This Practice covers the minimum requirements for design, fabrication, inspection, testing, shipment, and documentation for gas insulated switchgear containing gas-insulated buses, power circuit breakers, control, instrumentation, and metering for installation in unclassified areas. This Practice also covers remote monitoring and control requirements.

2. References

Applicable parts of the following Practice 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 will be used herein where appropriate.

Process Industry Practices (PIP)

- PIP ELTFT01 – *Electrical Equipment and Systems Field Inspection, Testing, and Commissioning*

Industry Codes and Standards

- American Society for Testing and Materials (ASTM)
  - ASTM D1533 – *Standard Practice for Specifying Color by the Munsell System*
- International Electrotechnical Commission (IEC)
  - IEC 62271-1 – *High Voltage Switchgear and Controlgear – Part 1: Common Specifications*
  - IEC 62271-100 – *High Voltage Switchgear and Controlgear – Part 100: Alternating Current Circuit Breakers*
  - IEC 62271-200 – *High Voltage Switchgear and Controlgear – Part 200: Alternating Current Metal-Enclosed Switchgear and Controlgear for Rated Voltage Above 1kV and Up to and Including 52kV*
  - IEC TS 62271-210 – *High Voltage Switchgear and Controlgear – Part 210: Seismic Qualification for Metal-Enclosed and Solid-Insulation Enclosed Switchgear and Controlgear Assemblies for Rated Voltages Above 1 kV and up to and Including 52 kV*

3. Definitions

gas insulated switchgear: A compact, multi-component assembly, enclosed in a grounded metallic housing in which the primary insulating medium is a compressed gas, and that typically consists of buses, switchgear, and associated equipment

owner: Party who owns the facility wherein the specified equipment will be used

purchaser: Party who awards the contract to the supplier. The purchaser may be the owner or the owner's authorized agent.

purchaser's inspector: The purchaser's authorized representative with authority to act in the interest of, and on behalf of, the purchaser in all quality assurance matters

supplier: The party responsible for manufacturing, furnishing, and/or installing the specified equipment