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TECHNICAL REVISION
November 2021

Electrical

PIP ELSWC07
Shielded Power Cable Specification
(5 to 46 kV)

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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 specification 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.

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Data Form

PIP ELSWC07-D - *Data Sheet for Shielded
Power Cables - 2001 Rated 5-46 kV*

1. Scope

This Practice provides requirements for the purchase of single and multiple conductor shielded power cable rated at 5 kV to 46 kV. This Practice describes the minimum technical requirements for design, material, construction, inspection, testing, and shipping of solid dielectric, insulated shielded copper cable.

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

- Association of Edison Illuminating Companies (AEIC)
 - AEIC CS8 - *Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46kV*
- American Society for Testing Materials (ASTM)
 - ASTM B3 - *Soft or Annealed Copper Wire*
 - ASTM B8 - *Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard or Soft*
 - ASTM B496 - *Compact Round Concentric-Lay-Stranded Copper Conductors*
- Canadian Standards Association (CSA)
 - C22.2 No. 131 – *Type TECK 90 Cable*
 - C22.2 No. 174 – *Cables and Cable Glands for use in Hazardous Locations*
- Institute of Electrical and Electronics Engineers (IEEE)
 - IEEE 1202 - *Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies*
- Insulated Cable Engineers Association (ICEA)
 - ICEA S-93-03 (ANSI/NEMA WC74) - *5-46 kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy*
- National Electrical Manufacturers Association (NEMA)
 - NEMA WC 26 - *Binational Wire and Cable Packaging Standard*
- National Fire Protection Association (NFPA)
 - NFPA 70 - *National Electrical Code (NEC)*
- Underwriters Laboratories
 - UL 1072 - *Medium-Voltage Power Cables*
 - UL 1569 - *Standard for Metal-Clad Cables*
 - UL 2225 - *Standard for Cables and Cable-Fittings For Use In Hazardous (Classified) Locations*