PROCESS INDUSTRY PRACTICES

August 2017

Electrical

PIP ELILS000
Lighting and Receptacle Installation Details for Class I, Division 2, Class II, Division 2, and Unclassified Areas

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.

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Table of Contents

1. Scope

This Practice provides installation details for luminaires and receptacles located in Class I, Division 2 areas, Class II, Division 2 areas, and unclassified areas. This Practice describes the basic assumptions used in developing these details and provides guidelines for their use.

Installation details for Class I, Division 1 and Class II Division 1 areas are excluded from the scope of this Practice.

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 ELCGL01 – *Electrical Design Criteria*
- PIP ELSGL01 – *Electrical Construction Specification*

3. Installation Practices

3.1 Lighting Layout

3.1.1 Minimum illumination levels for all process and working areas shall be in accordance with *PIP ELCGL01*.

3.1.2 The luminaire layout shall be made with a view towards minimizing the impact and visibility in the community outside of the process site.

3.1.3 Luminaires shall be located to avoid conflict with ductwork, piping, steel structures, cable tray, equipment, or other items which could cause shadow areas.

3.2 Lighting Installation

3.2.1 Installation shall be in accordance with *PIP ELSGL01*.

3.2.2 All luminaires shall be accessible for maintenance.

3.3.3 Floodlight poles shall be accessible to bucket trucks or have a lowering mechanism for servicing the luminaire.

3.2.4 Luminaires mounted above grade, such as on process towers

3.2.4.1 Shall be accessible from permanent platforms.

3.2.4.2 Shall not be mounted to ladders or ladder ways.

3.2.4.3 The use of a lowering type pole (such as “Swivel Pole”, “V-Spring”, or similar) shall be considered so maintenance on these luminaires can be done without the use of portable ladders.

3.2.4.4 When installed inside buildings, the luminaires shall be located to allow for routine maintenance without extraordinary measures. An example of

extraordinary measures may include such measures as draining a pool to maintain luminaires.

3.2.5 An appropriately-sized grounding conductor shall be routed to each luminaire. The conduit system shall not be used as the grounding conductor for luminaires in process areas.

3.2.6 Each luminaire circuit shall have an individual neutral conductor. Common neutrals shall not be used.

3.3 Receptacle Layout and Installation

3.3.1 Layout shall be in accordance with *PIP ELCGL01*.

3.3.2 Installation shall be in accordance with *PIP ELSGL01*.

3.3.3 An appropriately-sized grounding conductor shall be routed to each receptacle. The conduit system shall not be used as the grounding conductor for receptacles in process areas.

3.3.4 Each receptacle circuit shall have an individual neutral conductor. Common neutrals shall not be used.

4. Use of Details

4.1 Details apply to multiple luminaires or receptacles and are intended to convey general concepts of desired installation.

4.2 If specific fields are lined out on a detail bill of material, the item is not applicable to the detail.

4.3 Specific sizes are included in the detail bill of material only if the size of the part is common to all applicable luminaires or receptacles.

4.4 Details shall be customized as appropriate for a specific installation by copying as required and entering size and corresponding part number as appropriate.