PROCESS INDUSTRY PRACTICES

COMPLETE REVISION
March 2019

Structural

PIP STE02465
Augered Cast-in-Place Piles Design Guide

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

March 2005	*Issued*
February 2012	*Complete Revision*
March 2019	*Complete Revision*

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1. Scope

This Practice complements *PIP STS02465* and assists the engineer in preparation of contract documents for furnishing and installing augered cast-in-place (ACIP) piles.

This Practice is modeled on *DFI TM-ACIP-4* (Augered Cast-in-Place Piles Manual). For additional information, refer to that manual, *FHWA-HIF-07-03* (Geotechnical Engineering Circular No. 8), *DFI TM-ACIP-2* (Augered Cast-in-Place Piles Inspector's Guide), and *DFI TM-ACIP-3* (Guideline for Interpretation of Nondestructive Integrity Testing of Augered Cast-in-Place and Drilled Displacement Piles).

2. References

Applicable parts of the following Practices, industry codes and standards, and other references 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 STS02465 - *Augered Cast-in-Place Piles Installation Specification*
- PIP STS03001 - *Plain and Reinforced Concrete Specification*

2.2 Industry Codes and Standards

- American Concrete Institute (ACI)
  - ACI 212.3R - *Report on Chemical Admixtures for Concrete*
  - ACI 301 - *Specifications for Structural Concrete*
  - ACI 301M - *Specifications for Structural Concrete (Metric)*
- American Society of Civil Engineers (ASCE)
  - ASCE/SEI 7 - *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*
- ASTM International (ASTM)
  - ASTM A615/A615M - *Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement*
  - ASTM A706/A706M - *Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement*
  - ASTM A722/A722M - *Standard Specification for High-Strength Steel Bars for Prestressed Concrete*
  - ASTM C191 - *Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle*
  - ASTM D1143/D1143M - *Standard Test Methods for Deep Foundations Under Static Axial Compressive Load*
  - ASTM D4945 - *Standard Test Method for High-Strain Dynamic Testing of Deep Foundations*
  - ASTM D5882 - *Standard Test Method for Low Strain Impact Integrity Testing of Deep Foundations*
  - ASTM D6760 - *Standard Test Method for Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing*