



PROCESS
INDUSTRY
PRACTICES

TECHNICAL REVISION
August 2018

Coatings

**PIP CTCE1000
External Coating System
Selection Criteria**

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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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PUBLISHING HISTORY

February 2001	Issued	July 2006	Reaffirmation with Editorial Revision	August 2013	Editorial Revision
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Table of Contents

1. Scope	3
2. References	3
2.1 Process Industry Practices	3
2.2 Industry Codes and Standards	3
3. Definitions	3
4. Requirements	3

Data Forms

CTCE1000-D001 – Documentation Requirements Sheet

The following data forms shall be part of this Practice only if indicated on the purchaser's completed Documentation Requirements Sheet.

CTCE1000-D002 – Coating Type Code Definitions

CTCE1000-D011 – Severe Environment Selection Criteria (US Customary Units)

CTCE1000-D011M – Severe Environment Selection Criteria (SI Units)

CTCE1000-D012 – Severe/Seacoast Environment Selection Criteria (US Customary Units)

CTCE1000-D012M – Severe/Seacoast Environment Selection Criteria (SI Units)

CTCE1000-D013 – Offshore Environment Selection Criteria (US Customary Units)

CTCE1000-D013M – Offshore Environment Selection Criteria (SI Units)

CTCE1000-D014 – Moderate Environment Selection Criteria (US Customary Units)

CTCE1000-D014M – Moderate Environment Selection Criteria (SI Units)

CTCE1000-D021 – Severe Environment Selection Criteria Purchaser Defined (US Customary Units)

CTCE1000-D021M – Severe Environment Selection Criteria Purchaser Defined (SI Units)

CTCE1000-D022 – Severe/Seacoast Environment Selection Criteria Purchaser Defined (US Customary Units)

CTCE1000-D022M – Severe/Seacoast Environment Selection Criteria Purchaser Defined (SI Units)

CTCE1000-D023 – Offshore Environment Selection Criteria Purchaser Defined (US Customary Units)

CTCE1000-D023M – Offshore Environment Selection Criteria Purchaser Defined (SI Units)

- CTCE1000-D024** – Moderate Environment
Selection Criteria Purchaser Defined (US
Customary Units)
- CTCE1000-D024M** – Moderate Environment
Selection Criteria Purchaser Defined
(SI Units)
- CTCE1000-D025** – Purchaser Defined
Environment Selection Criteria (US
Customary Units)
- CTCE1000-D025M** – Purchaser Defined
Environment Selection Criteria (SI Units)

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1. Scope

This Practice describes the criteria for the selection of industrial coating systems for insulated and uninsulated substrates of structural steel, equipment, vessels, tanks, and piping. This Practice does not include criteria for the selection of industrial coating systems for internal linings, underground substrates, maintenance coating, architectural coatings, or color selection.

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 are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP CTSE1000 - *Application of External Coatings*

2.2 Industry Codes and Standards

- American National Standards Institute (ANSI)
 - ANSI Z535.1 - *Safety Colors*
- NACE International
 - NACE Standard SP0198-2017 - *Control of Corrosion under Thermal Insulation and Fireproofing Materials - A Systems Approach*
 - NACE 96 Paper No. 477 - *Updated Protective Coating Costs, Products and Service Life*. Gordon H. Brevoort, Kirk R. Shields, and Michael F MeLampy

3. Definitions

moderate environment: Industrial and chemical plant area subject to moderate external corrosion

offshore environment: Facilities and structures built in and above seawater

severe environment: Heavy industrial and chemical plant area subject to aggressive external corrosion

severe/seacoast environment: Within five miles of coast/sea water and in the presence of heavy industrial plants subject to aggressive external corrosion

4. Requirements

- 4.1 Coating materials shall be in accordance with this Practice.
- 4.2 Unless otherwise approved by the owner, coating materials used in the same system shall be provided by the same coating manufacturer.
- 4.3 Unless otherwise approved by the owner, coating systems shall be selected in accordance with the Selection Criteria Sheets, *PIP CTCE1000-D011* through *CTCE1000-D025*.