Z245.20 Series-18

Plant-applied external coatings for steel pipe

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Revision History

Z245.20 Series-18, Plant-applied external coatings for steel pipe

Update No. 1 — December 2019	Revision symbol (in margin)
Z245.20-18 Clauses 3, 4.3, 4.4, 6.2.1, 7.3.2.10, 12.9.3, 12.10.3, 12.11.2, 12.11.3, and 12.13.2 Tables 2, 3, 4, 6, 7, and 8 **Z245.21-18** Clauses 4.3, 6.2.1, 8.3.1, and 8.3.1A **Z245.22-18** Clauses 4.3, 6.1.1, 7.5.4.3.2, 8.4.1, A.3.2.1, and B.4.2.1	①

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Contents

Preface

This is the third edition of the CSA Z245.20 Series, *Plant-applied external coatings for steel pipe,* which consists of the eighth edition of CSA Z245.20, *Plant-applied external fusion bond epoxy coating for steel pipe,* the seventh edition of CSA Z245.21, *Plant-applied external polyethylene coating for steel pipe,* and the third edition of CSA Z245.22, *Plant-applied external polyurethane foam insulation coating for steel pipe.* This edition of CSA Z245.20 supersedes the previous editions published in 2014, 2010, 2006, 2002, 1998, 1992, and 1986; this edition of CSA Z245.21 supersedes the previous editions published in 2014, 2010, 2006, 2002, 1998, and 1992; and this edition of CSA Z245.22 supersedes the previous editions published in 2014 and 2010.

CSA Z245.20 deals with the requirements for plant-applied external fusion bond epoxy coating for steel pipe. The main differences from the previous edition are as follows:

- updated definitions (Clause 3); and
- revised test procedures (Clause 12).

CSA Z245.21 deals with the requirements for plant-applied external polyethylene coating for steel pipe. The main differences from the previous edition are as follows:

- revised product ordering requirements (Clause 4.1);
- revised requirements for the repair of coated pipe (Clause 8);
- revised test procedures (Clause 12); and
- revised acceptance criteria for polyethylene (Tables 3 and 9).

CSA Z245.22 deals with the requirements for plant-applied external polyurethane foam insulation coating for steel pipe. The main differences from the previous edition are as follows:

- revised test procedures (Clause 12);
- revised coating system qualification tests (Table 2); and
- revised acceptance criteria for polyethylene (Table 5).

In this 2018 edition, where a major change or addition to the previous edition of this Standard has been made, the clause, table, or figure affected is identified by the symbol Ⓟ in the margin. Users of this Standard are advised that the change markers in the text are not intended to be all-inclusive and are provided as a convenience only; such markers cannot constitute a comprehensive guide to the revisions made to this Standard. Care must therefore be taken not to rely on the change markers to determine the current requirements of this Standard. As always, users of this Standard must consider the entire Standard.

These Standards were prepared by the Subcommittee on Coatings, under the jurisdiction of the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials and the Strategic Steering Committee on Petroleum and Natural Gas Industry Systems, and have been formally approved by the Technical Committee.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*

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   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

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Z245.20-18
Plant-applied external fusion bond epoxy coating for steel pipe

1 Scope

1.1
This Standard covers the qualification, application, inspection, testing, handling, and storage of materials required for plant-applied fusion bond epoxy (FBE) coating applied externally to bare steel pipe. The coated pipe is intended primarily for buried or submerged service for oil or gas pipeline systems.

1.2
This Standard covers the following coating systems:

a) System 1A: single-layer FBE with a glass transition temperature of 115 °C or less;
b) System 1B: single-layer FBE with a glass transition temperature greater than 115 °C;
c) System 2A: two-layer FBE with an anti-corrosion coating and a protective overcoat;
d) System 2B: two-layer FBE with an anti-corrosion coating and an abrasion-resistant overcoat;
e) System 2C: two-layer FBE with an anti-corrosion coating and an anti-slip overcoat; and
f) System 3: three-layer FBE with an anti-slip overcoat applied over an anti-corrosion coating and a protective overcoat.

1.3
In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Standard; “should” is used to express a recommendation or that which is advised but not required, and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

Ⓟ 2 Reference publications
This Standard refers to the following publications, and where such reference is made, it shall be to the editions listed below, unless the user finds it more appropriate to use newer or amended editions of such publications.

