

Application of a Coating System to Exterior Surfaces of Steel Rail Cars

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Foreword

This AMPP standard practice encompasses the requirements for expert application of a quality coating system to exterior surfaces of steel rail cars that have been prepared in accordance with a specified, recognized standard. It is intended to complement NACE SP0386¹ and SP0295.²

Qualified inspection of the completed coating system and testing by the use of adequate, readily available instruments are also covered in this standard. Coating manufacturers, coating applicators, and those who have contracting authority for rail car coating installation should be able to use this standard to determine the facilities, equipment, and personnel needed to satisfy the requirements for rail car exterior coating systems.

Scope

This AMPP standard is intended for use by North America based rail car manufacturers, owners, operators, and repairers who are seeking guidance concerning all facets of exterior coating application processes and procedures.

Rationale

This standard was reviewed by SC 17 and deemed to have continuing relevance for the rail industry, hence it is being revised.

In AMPP standards, the terms *shall* and *must* are used to state requirements and are considered mandatory. The term *should* is used to state something that is recommended, but is not considered mandatory. The term *may* is used to state something considered optional.

Section 1: General

- 1.1 This standard describes procedures for the application of a coating system to the exterior surfaces of steel rail cars. The procedures cover all rail cars in general; however, some sections apply to a particular type (e.g., hopper, tank car).
- 1.2 The requirements for surface preparation, coating application, inspection, and quality tests necessary for externally coating a rail car are covered in this standard.
- 1.3 [Appendix A](#) (nonmandatory) describes facilities and equipment for the application of a coating system to the exterior of rail cars.

Section 2: Definitions

Coat: One layer of a coating system applied to a surface in a single continuous application to form a uniform film when dry.

Coating Applicator: The entity that is executing the specified work.

Coating System: The complete number and types of coats applied to a substrate in a predetermined order. (When used in a broader sense, surface preparation, pretreatments, dry film thickness [DFT], and method of application are included.)

Contracting Authority: The entity responsible for the approval and purchase of a completed rail car coating system.

DFT Measurement: An average of three dry film thickness (DFT) readings.

DFT Reading: A single dry film thickness gage determination.

Quality Assurance: Those planned and systematic actions necessary to provide specified documentation and adequate confidence that a rail car coating system will perform satisfactorily in service.

Quality Control: Those actions related to the measurable physical characteristics of an entire coating system's application serving as a means to confirm compliance with specified requirements.

Section 3: Areas of Responsibility

- 3.1 Contracting Authority
 - 3.1.1 Coating application shall not proceed until the contracting authority has determined that the coating applicator's facilities and equipment are adequate to comply with this standard.
 - 3.1.2 The contracting authority shall facilitate and participate in a prejob conference before coating application, including a coating supplier representative, coating application supervision, and inspection of in-process or completed work.
 - 3.1.3 The prejob conference shall include a review of this standard and all other specifications required by the contracting authority. The contracting authority shall determine that all conflicts identified in the review are resolved before coating application proceeds.
 - 3.1.4 The contracting authority shall approve the inspection forms.
 - 3.1.5 The contracting authority shall be responsible for quality assurance.
 - 3.1.6 The coating applicator shall be provided any information regarding the history of the rail car to be coated that is considered essential for the coating applicator to properly prepare the surface in a safe and responsible manner to receive a coating system.