

Currently Used Procedures for Dry Film Thickness Measurement and Recording for Coatings on Railcars

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Foreword

This technical report outlines the procedures and equipment currently used for the measurement and recording of dry film thickness (DFT) of coatings on railcars.

This report does not endorse a specific procedure or equipment, but is intended to inform railcar owners, lessees, builders, and repair facilities of the various procedures and equipment being used. The content of this report was derived from the results of an industry survey conducted in August 2014. The survey participants' affiliation with the rail industry consisted of coating manufacturers, applicators, engineers or specifiers, third party inspectors, DFT gauge manufacturers or suppliers, and railcar owners and lessees.

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Scope

This AMPP technical report is intended for use by North America-based rail car manufacturers, owners, operators, and repairers who are seeking guidance concerning DFT measurement of coatings applied to rail cars.

Rationale

The procedures currently being used to measure and record the DFT of coatings on railcars are usually company-specific procedures that often vary drastically from one company to another. In some cases, these procedures are formal written documents that are used by the applicator or inspector while taking and recording DFT readings. In other cases, there are no formal written documents to follow, the procedure is based on institutional knowledge or on-the-job training.

Inherently, these inconsistent procedures and the discretionary use of SSPC-PA 2 create varied inspection results that can lead to unnecessary repairs or complete rework.

Referenced Standards and Other Consensus Documents

AMPP/NACE/SSPC, www.ampp.org:

SSPC-PA 2

Procedure for Determining Conformance to Dry Coatings Thickness Requirements

Introduction

While many industrial coating applicators and inspectors use SSPC-PA 2 in its entirety, the railcar industry uses it in more of a discretionary manner such as:

- For daily verification and necessary adjustment of DFT gauges
- For acceptance criteria of allowable DFT range (SSPC-PA 2 Levels 1-5)
- For conflict resolution

Third-party or railcar owner or lessee inspectors often take and record DFT readings as well. In most cases, these inspections consist of taking numerous random DFT readings in confined areas within easy reach, focusing specifically on known problem areas (i.e., just off the weld seams, tie-in areas, hard-to-spray areas, etc.).