

# Procedure for Determining Conformance to Dry Coating Thickness Requirements

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## Section 1: Scope

- 1.1 This standard describes a procedure for determining shop or field conformance to a specified coating dry film thickness (DFT) range on ferrous and non-ferrous metal substrates using two types of nondestructive coating thickness gages (Type 1, magnetic pull-off, and Type 2, electronic) described in ASTM D7091.<sup>(1)</sup>
- 1.2 This standard defines a procedure to determine whether coatings conform to the minimum and the maximum thickness specified. See [Note 11.1](#) for an example of a possible modification when measuring dry film thickness on overcoated surfaces.
- 1.3 This document contains the following non-mandatory appendices. Appendices 2, 3, 4, 5, 6, 7, 10, and 11 become mandatory when invoked by the project specification or if the contractor or laboratory has agreed in writing to comply with their provisions.

- [Appendix 1](#) Numerical Example of Average Thickness Measurement and Illustration of the Procedure for Determining the Magnitude of a Nonconforming Area
- [Appendix 2](#) Methods for Measuring Dry Film Thickness on Steel Beams (Girders)
- [Appendix 3](#) Methods for Measuring Dry Film Thickness for a Laydown of Beams, Structural Steel, and Miscellaneous Parts after Shop Coating
- [Appendix 4](#) Method for Measuring Dry Film Thickness on Coated Steel Test Panels
- [Appendix 5](#) Method for Measuring Dry Film Thickness of Thin Coatings on Coated Steel Test Panels that Have Been Abrasive Blast Cleaned
- [Appendix 6](#) Method for Measuring the Dry Film Thickness of Coatings on Edges
- [Appendix 7](#) Method for Measuring Dry Film Thickness on Coated Steel Pipe Exterior
- [Appendix 8](#) Examples of the Adjustment of Type 2 Gages Using Shims
- [Appendix 9](#) Precaution Regarding Use of the Standard for Coating Failure Investigations
- [Appendix 10](#) Procedure for Obtaining a Greater Population of Thickness Measurements on Plate, Beams, and Pipe Spools Using Type 2 Gage Continuous Read/Scanning Technology
- [Appendix 11](#) Method for Measuring the Thickness of Intumescent (Fireproofing) Coatings Applied to Load-Bearing Structural Steel Members, Fire Divisions, Pipework, and Vessels/Tanks

- 1.4 **Units of Measure:** This standard makes use of both the ASTM SI 10 International System Units (SI) and U.S. Customary units. The measurements are not exact equivalents; therefore, each system must be used independently of the other. Also, a tilde (~) is used to indicate approximation.

## Section 2: Referenced Standards

- 2.1 The latest issue, revision, or amendment of the referenced standards in effect on the date of invitation to bid shall govern unless otherwise specified. Standards marked with an asterisk (\*) are referenced only in the notes, which are not requirements of this standard.
- 2.2 If there is a conflict between the requirements of any of the cited reference standards and this standard, the requirements of this standard shall prevail.

<sup>(1)</sup> ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. For referenced ASTM standards visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For Annual Book of ASTM Standards volume information, or to review the scope of an ASTM standard, refer to the standard's Document Summary page on the ASTM website.