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Standard Practice

Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

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Foreword

A coating is applied to a substrate to prevent corrosion, reduce abrasion, and reduce product contamination. The degree of coating continuity required is dictated by service conditions. Discontinuities in a coating are frequently very minute and not readily visible. This standard practice provides a procedure for electrical detection of minute discontinuities in new coating systems that are applied to conductive substrates. The user should refer to NACE Standards RP0274,¹ RP0490,² and/or TM0384³ for procedures specific to electrical inspection of pipeline coatings. This standard describes procedures for determining discontinuities using two types of test equipment: low-voltage wet sponge testers and high-voltage spark testers.

This standard is intended for reference in coating specifications or other documents and may be used by specifiers, applicators, and coating inspectors if a specification requires holiday detection on conductive substrates. For the purposes of this standard, the term "coating" can refer either to atmospheric or immersion service.

This standard was originally prepared in 1988 by Task Group T-6A-37, a component of Unit Committee T-6A on Coating and Lining Materials for Immersion Service. It was reaffirmed in 1990, revised in 1999, and reaffirmed in 2006 by Specific Technology Group (STG) 03. This standard is issued by NACE International under the auspices of STG 03 on Protective Coatings and Linings: Immersion and Buried. It combines the input of representatives of coating manufacturers, applicators, inspection agencies, architectural engineers, equipment manufacturers, and general consumers.

In NACE standards, the terms *shall*, *must*, *should*, and *may* are used in accordance with the definitions of these terms in the *NACE Publications Style Manual*, 4th ed., Paragraph 7.4.1.9. *Shall* and *must* are used to state mandatory requirements. The term *should* is used to state something considered good and is recommended but is not mandatory. The term *may* is used to state something considered optional.

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