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Standard
Test Method

Measurement of Protective Coating Electrical Conductance on Underground Pipelines

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Foreword

This standard test method presents guidelines and procedures for use primarily by corrosion control personnel in the pipeline industry to determine the general condition of a pipeline coating. These techniques are used to measure the coating conductance (inverse of coating resistance) on sections of underground pipelines. This test method applies only to pipe coated with dielectric coatings.

When surveying a coated pipeline system, it may be necessary to determine the conductance of the coating. The conductance of a coating can vary considerably along the pipeline. Variations may be caused by changes in average soil resistivity, terrain, and quality of construction. To obtain data for coating conductance calculations, interrupted pipe-to-soil potentials and line current readings are taken at pre-selected intervals. It should be noted that the average soil resistivity has a direct effect on the coating conductance measurement. Because soil resistivity can affect the coating conductance, it must be known when evaluating a section of a pipeline coating.

This standard was prepared by NACE Task Group 030 on Coating Conductance. This Task Group was administered by Specific Technology Group (STG) 03 on Protective Coatings and Linings—Immersion/Buried. Sponsoring STGs also included STG 05 on Cathodic/Anodic Protection; STG 35 on Pipelines, Tanks, and Well Casings; and STG 62 on Testing and Monitoring Procedures. This standard is issued by NACE under the auspices of STG 03.

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. *Should* is used to state something considered good and is recommended but is not mandatory. *May* is used to state something considered optional.

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