Test Method for Measurement of Gouge Resistance of Coating Systems

Test Method for Measurement of Gouge Resistance of Coating Systems

This AMPP standard represents a consensus of those individual members who have reviewed this document, its scope, and provisions. Its acceptance does not in any respect preclude anyone, whether he or she has adopted the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not in conformance with this standard. Nothing contained in this AMPP standard is to be construed as granting any right, by implication or otherwise, to manufacture, sell, or use in connection with any method, apparatus, or product covered by Letters Patent, or as indemnifying or protecting anyone against liability for infringement of Letters Patent. This standard represents minimum requirements and should in no way be interpreted as a restriction on the use of better procedures or materials. Neither is this standard intended to apply in all cases relating to the subject. Unpredictable circumstances may negate the usefulness of this standard in specific instances. AMPP assumes no responsibility for the interpretation or use of this standard by other parties and accepts responsibility for only those official AMPP interpretations issued by AMPP in accordance with its governing procedures and policies which preclude the issuance of interpretations by individual volunteers.

Users of this AMPP standard are responsible for reviewing appropriate health, safety, environmental, and regulatory documents and for determining their applicability in relation to this standard prior to its use. This AMPP standard may not necessarily address all potential health and safety problems or environmental hazards associated with the use of materials, equipment, and/or operations detailed or referred to within this standard. Users of this AMPP standard are also responsible for establishing appropriate health, safety, and environmental protection practices, in consultation with appropriate regulatory authorities if necessary, to achieve compliance with any existing applicable regulatory requirements prior to the use of this standard.

CAUTIONARY NOTICE: AMPP standards are subject to periodic review and may be revised or withdrawn at any time in accordance with AMPP technical committee procedures. AMPP requires that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of initial publication and subsequently from the date of each reaffirmation or revision. The user is cautioned to obtain the latest edition. Purchasers of AMPP standards may receive current information on all standards and other AMPP/NACE/SSPC publications by contacting AMPP Customer Support, 15835 Park Ten Place, Houston, Texas 77084-5145 (Tel: +1-281-228-6200, email: customersupport@ampp.org).

Document History:

2022-11-17: Revised by AMPP Standards Committee (SC) 03, External Coatings – Buried & Immersed

2015-06-25 Developed by NACE Specific Technology Group (STG) 03, Coatings and Linings, Protective—Immersion and Buried Service

AMPP values your input. To provide feedback on this standard, please contact: standards@ampp.org

Test Method for Measurement of Gouge Resistance of Coating Systems

Foreword

This standard provides a test method for determining the gouge resistance of coating systems used on buried ferrous metal pipelines.

Organic coatings are the most frequently used materials to protect buried ferrous metal pipelines from corrosion and mechanical damage. During storage, transport, and installation, pipes are exposed to severe mechanical stress that can lead to damage of the protective coating layer.

Therefore, it is important to use coatings with high mechanical strength and toughness. Impact resistance, wear resistance, hardness, and resistance to shear scratch/indentation are good indicators of the coating's mechanical strength and toughness.

Scope

This standard describes the design and operation of an apparatus to determine the gouge resistance of pipe coatings. It is intended to be used by pipeline operating companies, pipeline owners, pipeline contractors, pipeline inspection services, and pipeline coating mills.

Rationale

There have been several efforts in the past to develop a reliable test method for determining the gouge resistance of coating systems, but they failed because different kinds of test equipment and test conditions led to scattered data. This tighter test method should lead to more consistent test data.

This latest effort to develop a test method was driven by the joint efforts of representatives of coating manufacturers, coating applicators, equipment suppliers, corrosion specialists, and other personnel concerned with the construction of underground pipeline facilities.

This revision includes the number of test panels and photos of the test apparatus.

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.