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In-Situ Coating of Steel Pipelines via Pigging

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Foreword

In-situ pipeline coating was originally pioneered in the 1970s and has been used effectively to protect the internal surface of existing pipelines and extend the life of steel pipelines for many years.

Scope

This report provides the most current technology and industry practices for the internal in-situ cleaning and coating application in an existing steel pipeline. This report presents general practices and preferences in regard to the cleaning, surface preparation, drying, and the application of a coating in a steel pipeline by the pig (scraper) batching method. It is applicable to onshore or offshore steel pipelines in all industries including the oil and gas gathering, distribution, and transmission industries. It is also applicable to welded steel water and brine handling pipelines.

Rationale

In-situ coating is a non-traditional corrosion coating technology for the following reasons: (1) the cleaning process does not involve traditional abrasive blasting, and (2) the process lacks the ability to 100% inspect either the surface preparation or the coating application. Acceptance criteria rely on analytical data, test area inspection, and limited visual inspection. There is a recognized need for this report in order to make the broader industry aware of what is a seldom used but very established technology and to ensure long-term effectiveness of the coating in such applications by including the necessary details. This report is intended for use by pipeline operators, pipeline service providers, government agencies, and any other persons or companies involved in planning, designing, maintaining, or managing pipeline integrity.

Referenced Standards and Other Consensus Documents

Unless specifically dated, the latest edition, revision, or amendment of the documents listed in the table below shall apply.

AMPP/NACE/SSPC, www.ampp.org:	
SSPC-PA 2	Procedure for Determining Conformance to Dry Coating Thickness Requirements
NACE No. 2/SSPC-SP 10	Near-White Metal Blast Cleaning
ASTM International, www.astm.org:	
ASTM D3359	Standard Practice for Adhesion Measurement by Tape Test
ASTM D6677	Standard Practice for Scribe Adhesion
ASTM D5402	Standard Practice for Assessing the Solvent Resistance of Organic Coatings Using Solvent Rubs

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