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Acceptance Criteria for Cathodic Protection of Steel in Concrete Structures

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Foreword

Historically, NACE SP0290, NACE SP0216, and NACE SP0408 included sets of criteria that needed to be satisfied to indicate that a cathodic protection (CP) system is delivering adequate current to passivate the reinforcing steel or reduce its corrosion current to low and non-destructive levels. These criteria were mostly the same, so the aim of this standard is to set out the essential criteria that each one of the above standards must satisfy in a single document. This allows each of the above standards, which deal with different applications of cathodic protection, to concentrate and expand on aspects that are specific for each application. This standard further suggests techniques that can be employed to estimate the level of protection achieved by a non-compliant cathodic protection method.

Scope

This document defines the cathodic protection criteria required to protect reinforcing steel in concrete.

Rationale

Historically, NACE SP0290, NACE SP0216, and NACE SP0408 included sets of criteria that needed to be satisfied to indicate that a cathodic protection (CP) system is delivering adequate current to passivate the reinforcing steel or reduce its corrosion current to low and non-destructive levels. These criteria were mostly the same, so the aim of this standard is to set out the essential criteria that each one of the above standards must satisfy in a single document. This allows each of the above standards, which deal with different applications of cathodic protection, to concentrate and expand on aspects that are specific for each application. This standard further suggests techniques that can be employed to estimate the level of protection achieved by a non-compliant cathodic protection method.

Referenced Standards and Other Consensus Documents

The latest edition, revision, or amendment of the referenced standards in effect shall govern unless otherwise dated.

AMPP/NACE/SSPC, www.ampp.org:	
NACE SP0290	Impressed Current Cathodic Protection of Reinforcing Steel in Atmospherically Exposed Concrete Structures
NACE SP0216	Sacrificial Cathodic Protection of Reinforcing Steel in Atmospherically Exposed Concrete Structures
NACE SP0408	Cathodic Protection of Reinforcing Steel in Buried or Submerged Concrete Structures
NACE/ASTM G193	Standard Terminology and Acronyms Relating to Corrosion
NACE Publication 57108	One Hundred Millivolt (mV) Cathodic Polarization Criterion
American Society for Quality (ASQ), www.asq.org:	
ANSI/ASQ Z1.47	Sampling Procedures and Tables for Inspection by Attributes
ASTM International (ASTM), www.astm.org:	
ASTM C876	Standard Test Method for Corrosion Potentials of Uncoated Reinforcing Steel in Concrete
ASTM G3	Standard Practice for Conventions Applicable to Electrochemical Measurements in Corrosion Testing
ASTM E105	Standard Guide for Probability Sampling of Materials