

Cathodic Protection of Reinforcing Steel in Buried or Submerged Concrete Structures

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ABSTRACT

This NACE standard presents guidelines for cathodic protection (CP) of reinforcing steel in buried or submerged concrete structures. These guidelines provide corrosion control personnel with information to control corrosion of conventional reinforcing steel in portland cement concrete structures through the application of CP. The guidelines presented in this standard are limited to CP systems for new or existing buried or submerged reinforced concrete elements.

KEYWORDS

Reinforced concrete, reinforcing steel, cathodic protection, submerged, buried, galvanic anodes, impressed current anodes, TG 048.

Foreword

The purpose of this NACE standard practice is to present guidelines for cathodic protection (CP) of reinforcing steel in buried or submerged concrete structures. These guidelines provide corrosion control personnel with information to control corrosion of conventional reinforcing steel in portland cement concrete structures through the application of CP.

For more information on design, evaluation, maintenance, and rehabilitation of reinforcing steel in concrete, refer to NACE SP0187,¹ SP0390,² and SP0308.³ CP of reinforcing steel in atmospherically exposed concrete is described in NACE SP0290⁴ and SP0216.⁵ For a state-of-the-art overview on criteria for CP of prestressed concrete structures, refer to NACE Publication 01102.⁶ For more information on CP of prestressed concrete cylinder pipelines, refer to NACE SP0100.⁷

This NACE standard was originally prepared in 2008 and revised in 2014 by Task Group (TG) 048, “Cathodic Protection of Reinforcing Steel in Buried or Submerged Concrete Structures.” It was reaffirmed (with editorial changes) by TG 048 in 2019. To provide the necessary information on all aspects of the subject and to provide input from all interested parties, TG 048 included corrosion consultants, consulting engineers, architect-engineers, CP engineers, researchers, structure owners, and representatives from industry and government. TG 048 is administered by Specific Technology Group (STG) 01, “Reinforced Concrete,” and sponsored by STG 05, “Cathodic/Anodic Protection.” This standard is published by NACE under the auspices of STG 01.

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