

Cathodic Protection to Control External Corrosion of Concrete Pressure Pipelines and Mortar-Coated Steel Pipelines for Water or Waste Water Service

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ABSTRACT

Furnishes guidelines that provide corrosion control personnel, owners, operators, designers, manufacturers, and contractors information on corrosion control of prestressed concrete cylinder pipe (PCCP) and mortar-coated steel pipelines for water or waste water service through the application of cathodic protection. The guidelines presented are applicable to new or existing buried pipelines with or without a supplemental coating.

KEYWORDS

Cathodic protection, concrete, PCCP, pipeline, water, waste water, TG 019.

Foreword

The purpose of this standard practice is to furnish guidelines that provide corrosion control personnel, owners, operators, designers, manufacturers, and contractors with information on controlling external corrosion of embedded steel in concrete pressure pipelines and mortar-coated steel pipelines for water or waste water service through the application of cathodic protection (CP). The guidelines presented are applicable to new or existing buried pipelines with or without a supplemental coating.

The provisions of this standard should be applied under the direction of competent persons who are qualified to engage in the practice of corrosion control on buried or submerged metallic pipelines. Such persons may be licensed professional engineers or persons recognized as Corrosion Specialists or CP Specialists by NACE. The professional experience of such persons should include suitable experience in CP of prestressed concrete structures, if protection of that type of structure is being planned.

This standard was originally prepared in 2000 by NACE Task Group T-10A-28, a component of Unit Committee T-10A on Cathodic Protection. To provide the necessary expertise on all aspects of the subject and to receive input from all interested parties, Task Group T-10A-28 was composed of corrosion consultants, consulting engineers, architect-engineers, CP engineers, researchers, pipeline owners, and representatives from both industry and government. The standard was reaffirmed in 2004 by Specific Technology Group (STG) 05, "Cathodic/Anodic Protection" and revised in 2008 and 2014 by Task Group (TG) 019, "Mortar-Coated Pipes: Cathodic Protection Criteria." It was reaffirmed with additional changes in 2019 by TG 019. This standard is issued by NACE under the auspices of STG 05.

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. The terms **shall** and **must** are used to state a requirement, and are considered mandatory. The term **should** is used to state something good and is recommended, but is not considered mandatory. The term **may** is used to state something considered optional.

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