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Galvanic Anode Cathodic Protection of Internal Submerged Surfaces of Steel Water Storage Tanks

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ABSTRACT

This standard presents the practices used in providing galvanic anode cathodic protection (CP) to the normally submerged steel surfaces inside steel water storage tanks. It provides owners, engineers, and contractors a standard practice for the application of CP to the submerged surfaces of steel water storage tanks; for determining the effectiveness of these CP systems; and for the operation and maintenance of these CP systems.

This standard is applicable to steel water storage tanks of various sizes used in municipal water supply and fire protection, including elevated tanks and flat-bottom tanks at ground level. Although the practices presented in this standard generally are applicable to all such tanks, the galvanic anode CP system described in this standard may not be practical for tanks with large CP current demands.

KEYWORDS

Cathodic protection, galvanic anode, steel water storage tank, potable water, reclaimed water, drinking water, irrigation water, fire protection water, TG 284

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Foreword

The purpose of this standard is to present the standard practices used in providing galvanic anode cathodic protection (CP) to the normally submerged steel surfaces inside steel water storage tanks. It provides owners, engineers, and contractors a standard practice for the application of CP to the submerged surfaces of steel water storage tanks; for determining the effectiveness of these CP systems; and for the operation and maintenance of these CP systems.

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This standard was originally prepared in 1996 by NACE Task Group (TG) T-7L-1, a component of Unit Committee T-7L, "Cathodic Protection." It was revised in 2004, 2011, 2015, and 2020 by TG 284, "Cathodic Protection, Galvanic Anode for Internal Submerged Surfaces of Steel Water Storage Tanks—Review of NACE SP0196." TG 284 is administered by Specific Technology Group (STG) 05, "Cathodic/Anodic Protection." It is sponsored by STG 11, "Water Treatment," and STG 35, "Pipelines, Tanks, and Well Casings." This standard is issued by NACE under the auspices of STG 05.

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