

# External Corrosion Control of On-Grade Carbon Steel Storage Tank Bottoms

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AMPP values your input. To provide feedback on this standard, please contact: [standards@ampp.org](mailto:standards@ampp.org)

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## Foreword

Sustaining long-term leak-free operation of aboveground storage tank (AST) bottoms is an extremely important goal of all AST owners and operators. Mitigation of corrosion on the external side of on-grade carbon steel tank bottoms is a principal element necessary to achieve this goal.

## Scope

This standard provides a comprehensive compilation of corrosion mitigation considerations, practices, and procedures for AST bottoms. It is applicable from tank construction through long-term integrity management and maintenance processes. It presents supplements and alternatives to cathodic protection (CP). A broad section on vapor corrosion inhibitor (VCI) practices and procedures for mitigation of external tank bottom corrosion is included.

## Rationale

Attainment of low tank bottom maintenance costs and leak-free AST bottom operation over the long term is a function of more than just the implementation of external corrosion control systems. This standard practice provides industry guidance on a variety of important corrosion mitigation practices to consider during AST engineering and construction, as well as during the operational phase.

## 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](http://www.ampp.org):**

NACE TM0304	Offshore Platform Atmospheric and Splash Zone Maintenance Coating System Evaluation
NACE No. 2/SSPC-SP 10	Near-White Metal Blast Cleaning
NACE SP0193	External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms
NACE SP0775	Preparation, Installation, Analysis, and Interpretation of Corrosion Coupons in Oilfield Operations
SSPC-PA 2	Procedure for Determining Conformance to Dry Coating Thickness Requirements
SSPC-SP 2	Hand Tool Cleaning

### **American Petroleum Institute (API) [www.api.org](http://www.api.org):**

API 650	Welded Tanks for Oil Storage
API 651	Cathodic Protection of Aboveground Petroleum Storage Tanks
API 653	Tank Inspection, Repair, Alteration, and Reconstruction

### **ASTM International, [www.astm.org](http://www.astm.org):**

ASTM G 5	Standard Test Method for Cathodic Disbondment Test of Pipeline Coatings (Attached Cell Method)
ASTM G 14	Standard Test Method for Impact Resistance of Pipeline Coatings (Falling Weight Test)
ASTM D4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers