

THIS MONTH: CORROSION OF BRIDGES,  
HIGHWAYS, AND PIERS

OCTOBER 2023  
VOL. 62, NO. 10

# **MMP** MATERIALS PERFORMANCE

CORROSION PREVENTION AND CONTROL WORLDWIDE

[www.materialsperformance.com](http://www.materialsperformance.com)

## **NEW ANTI-CORROSION COATING SYSTEM FOR STEEL INFRASTRUCTURE**

**Chloride-Induced Corrosion of  
Rebars at Various Temperatures**

**Tele-Inspection Nondestructive  
Evaluation for Corrosion Applications**

**Microstructure and Properties  
of Zn-Mg Alloys**

**Corrosion of Al/Alumina Composites  
vs. APB Temperature**

**Special Feature:**

**2024 AMPP Annual  
Conference + Expo  
Advance Program**






## About the Cover

This issue of *MP* is dedicated to the protection of bridges, highways, and piers from corrosion. The cover photo features the newly built, 2.4-km-long Pelješac Bridge, a cable-stayed bridge in Dubrovnik-Neretva County, Croatia. The feature article describes the Bridge Corrosion Prevention and Repair Act of 2023 and its impact on AMPP. This issue also contains the Advance Program for the 2024 AMPP Annual Conference + Expo. The program includes all the information you'll need to plan for a rewarding conference next year in New Orleans, Louisiana, USA.



## Provenance Welded, Stainless Steel 304 Surface Steel Weld

Provenance Welded, Stainless Steel 304 Surface Steel Weld is a high-strength, corrosion-resistant material used in a variety of applications. It is made from a combination of stainless steel and carbon steel, providing a strong, durable material that can withstand harsh environments. The material is available in a variety of grades, including 304, 316, and 321, and is used in a wide range of applications, from industrial machinery to marine equipment. The material is known for its excellent weldability, making it a popular choice for manufacturers. It is also known for its resistance to corrosion, which makes it ideal for use in harsh environments. The material is available in a variety of forms, including sheet, plate, and pipe, and is used in a wide range of applications. The material is known for its excellent weldability, making it a popular choice for manufacturers. It is also known for its resistance to corrosion, which makes it ideal for use in harsh environments. The material is available in a variety of forms, including sheet, plate, and pipe, and is used in a wide range of applications.



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## Anticorrosion Technology for Cased Pipelines



Cortec Corp. (St. Paul, Minnesota, USA) has unveiled CorroLogic VpCI Filler, a patented technology that equips pipeline owners and maintenance crews to protect cased pipeline crossings from corrosion. This technology is comprised of two parts: a liquid vapor phase corrosion inhibitor (VpCI) concentrate that can be diluted on site, and a powder gelling agent that can be added just prior to application that increases viscosity and leaves behind a soft gelled substance inside the casing. The filler offers the dual advantage of discouraging the ingress of water and debris while inhibiting corrosion on metal surfaces that it directly touches. It also releases corrosion-inhibiting vapors that can migrate throughout void spaces and under disbonded coatings to form a molecular corrosion-inhibiting layer that would normally be unprotected by traditional coating or wax fillers. While pipelines require constant maintenance to ensure their reliability and safety, applying corrosion inhibitors in hard-to-reach cased pipeline

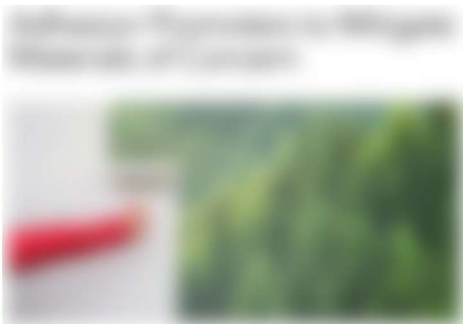
## CorroLogic VpCI Filler

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crossings still can be challenging. To that end, CorroLogic VpCI Filler has vastly improved the economy and effectiveness of the protection methods available, enabling pipeline companies to apply it in order to promote pipeline integrity before damage occurs. Tel: 1 800-426-7832, web site: [www.cortecvci.com](http://www.cortecvci.com).



CorroLogic VpCI Filler is a revolutionary new product that has been developed by CorroLogic, a leading manufacturer of corrosion inhibitors. This innovative product is designed to protect pipelines from corrosion, ensuring their integrity and longevity. It is a highly effective solution for pipeline companies looking to prevent damage and maintain pipeline integrity before it occurs. The product is easy to apply and provides long-lasting protection, making it a cost-effective choice for pipeline maintenance. For more information, contact CorroLogic at 1 800-426-7832 or visit their website at [www.cortecvci.com](http://www.cortecvci.com).

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### Vapor-Phase Corrosion Inhibitor for Fire Protection Industry



Having previously introduced the Vapor phase Corrosion Inhibitor (VpCI) to the fire sprinkler system industry, General Air Products (Exton, Pennsylvania, USA) has unveiled its latest corrosion prevention product in the Vapor Pipe Shield. Whereas VpCI protects and extends the shelf life of many familiar metal products, the Vapor Pipe Shield will be able to protect dry and pre-action sprinkler systems from damaging corrosion. This technology is a patented and UL-listed delivery system of VpCI piped directly in-line between the air compressor and dry pipe valve. With no electrical hookups, this completely mechanical process makes the Vapor Pipe Shield easy to install as an air maintenance device. Once installed, the VpCI molecules are dispersed throughout the piping using the airflow provided by the dry or pre-action system and then adsorb to the metal surface. Once there, these molecules form a one-molecule-thick barrier, or protective shield, on the metal pipe that repels corrosive elements from direct contact, thereby stopping corrosion in its tracks. And because VpCI molecules can also penetrate any standing water in the piping network, it doesn't matter how much oxygen or moisture is in the sprinkler system, thereby rendering them irrelevant. Tel: 1 800-345-8207, web site: [www.generalairproducts.com](http://www.generalairproducts.com). **MP**