

# NEWS ALERT



## Cortec's CORROSION 2014 Paper #4250 Featured in June Issue of Materials Performance!

Cortec's CORROSION 2014 paper no. 4250, "Protecting Concrete Reinforcement Using Admixture with Migrating Corrosion Inhibitor and Water Repellent Component," by Ming Shen, Alla Furman, and Andrea Hansen, is featured in the Chemical Treatment Essentials section of the June 2015 Issue of Materials Performance.

This Cortec® technical paper discusses the experimental procedure and results of testing a new admixture including Migrating Corrosion Inhibitors (MCI®) and waterproofing ingredients. The paper explains that corrosive electrolytes and species can penetrate concrete due to its porous nature to reach and eventually corrode the rebar. Electrochemical tests showed that this admixture provides superior corrosion protection to the rebar. Additional test results demonstrated that the admixture reduces water permeability and does not affect workability, set time, and mechanical properties of concrete.

To read the full paper, visit: [www.nace.org](http://www.nace.org)

### Admixture with Corrosion Inhibitor and Water Repellent Protects Concrete Rebar



Corrosive electrolytes can penetrate concrete due to its porous nature, and corrosion initiates when moisture, chloride ions, and carbon dioxide (CO<sub>2</sub>) reach the surface of the steel rebar. The corrosion products create expansive stresses that crack and spall the concrete cover.

To mitigate rebar corrosion, a new admixture was formulated that employs a synergistic blend of migrating corrosion inhibitors and waterproofing ingredients, which enhances corrosion protection by forming a protective film on the rebar as well as reducing the ingress of corrosive, water-soluble species. Trials were run to confirm compatibility between the admixture's corrosion inhibitor and waterproofing components. Electrochemical test results show this admixture provides corrosion protection to the rebar, while additional test results demonstrate the admixture reduces water permeability without negatively affecting workability, set time, and mechanical properties of the concrete. CORROSION 2014 paper no. 4250, "Protecting Concrete Reinforcement Using Admixture with Migrating Corrosion Inhibitor and Water Repellent Component," by M. Shen, A. Furman, and A. Hansen, discusses the experimental procedure and results. **MP**

Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for the Packaging, Metalworking, Construction, Electronics, Water Treatment, Oil & Gas, and other industries. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001, ISO 14001, and ISO 17025 Certified.

