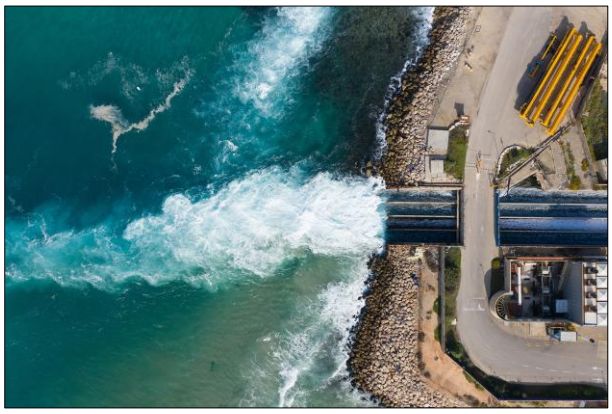
Editorial Contact:
Cortec® Advertising Agency
Julie Holmquist
(651) 429-1100 Ext. 1194
jholmquist@cortecvci.com

Attention: Editor
December 30, 2025
PRESS RELEASE

Cortec® Offers Solutions to Boost Concrete Longevity as Desalination Demand Grows



The rising demand for drinking water in arid regions around the globe has naturally led to steady growth in the desalination market, projected to expand at a CAGR (compound annual growth rate) of 11.6% from 2025-3033. Many desalination projects are under way, especially in the Middle East and Africa, while facilities built one or two decades ago are shifting to the maintenance phase. In either case, the corrosiveness of seawater (average 3.5% salinity) and even higher salinity brine water is a constant threat to infrastructure longevity. That is why Cortec® stands ready to help designers, engineers, contractors, and municipalities face these challenges with Migrating Corrosion Inhibitors to extend the service life of reinforced concrete fixtures.

Mitigate Corrosion. Extend Service Life.

Cortec® Migrating Corrosion Inhibitors (MCI®) are an excellent addition to desalination plant concrete because of their ability to delay time to corrosion initiation and reduce corrosion rates once started. Applied as an admixture or surface treatment, MCI® chemistry works its way through concrete pores to form a protective molecular layer on the surface of embedded reinforcing metal, guarding against interaction with corrosive elements such as chlorides and moisture. This protective layer

continues to function even in the presence of cracks that inevitably form as concrete ages. Unlike traditional calcium nitrite (CNI) admixtures, MCI® does not negatively affect concrete properties, making it easy for contractors to work with. Better still for drinking water facilities, several MCI® products are certified to meet ANSI/NSF Standard 61 for use in potable water structures.

MCI® in Action at Desalination Plants

Two examples highlight the potential uses for MCI® in desalination plants. In 2003, a desalination plant was built in Europe to serve two million people. Since brine is two times as salty as seawater, MCI®-2020 (a surface applied corrosion inhibitor) was used to protect the reinforced concrete chest at the beginning of the brine discharge channel; MCI®-2005 was admixed into the reinforced concrete chest at the end of the discharge channel.*

Another large desalination project in the Middle East (2010-2013) used MCI® in concrete fixtures at various stages of the desalination process. Large precast concrete intake pipes transporting seawater to the desalination plant were treated with MCI®-2005 and crystalline water-proofing admixtures. The same two admixtures were used in pretreatment sand filtration bins and brine water reservoirs. To make up for application errors in some of the desalinated water reservoirs where the concrete cover was too thin, MCI®-2020 was applied to reservoir walls and columns after construction.**

MCI® has also been used in a variety of concrete water tower repairs over the years, indicating the versatility of this corrosion fighting solution at any stage of a structure's service life.

A Corrosion Solution for Municipalities Worldwide

As communities across the globe actively pursue desalination in answer to increasing potable water demand, they face ongoing durability challenges from the corrosiveness of seawater and brine. Cortec® is ready to support these projects with practical solutions to enhance the longevity of these critical infrastructure elements. Contact Cortec® to learn more about extending the service life of desalination infrastructure with MCI® technology.

Keywords: Cortec, concrete longevity, desalination demand, Migrating Corrosion Inhibitors, MCI, corrosion solution, desalination challenges, how corrosive is seawater, how corrosive is desalination brine, desalination trends

See Cortec® Case History #533 (login required): http://www.corteccasehistories.com/.
****See Cortec® Case History #594 (login required): http://www.corteccasehistories.com/.***

Need a High-Resolution Photo? Visit: **www.cortecadvertising.com.**

Cortec® Corporation is the global leader in innovative, environmentally responsible VpCI® and MCI® corrosion control technologies for packaging, metalworking, construction, electronics, water treatment, oil & gas, and other industries. Our relentless dedication to sustainability, quality, service, and support is unmatched in the industry. Headquartered in St. Paul, Minnesota, Cortec® manufactures over 400 products distributed worldwide. ISO 9001:2015 and ISO 14001:2015 certified. Cortec® website: http://www.cortecvci.com. Phone: 1-800-426-7832. FAX: (651) 429-1122.