

# TOTAL CORROSION MANAGEMENT

(TCM®)

The global leader in concrete repair and protection, corrosion inhibition and structural strengthening systems. All are supported by the most highly trained and experienced sales and technical support network in the industry.

## FULL RANGE OF PRODUCTS:

- Sacrificial anodes
- Surface-applied inhibitors
- High performance coatings
- Reinforcing steel coatings
- Concrete repair mortars
- Waterproofing systems
- Mixed systems (combination of the above)



Your Sika sales representative can offer these combined solutions to support your complete project requirements for corrosion management.

## SIKA TOTAL CORROSION MANAGEMENT SUMMARY

PRODUCT	BEST USE	TARGET	INITIAL COST
<b>Sika FerroGard 901</b>	New Construction and admixture to any repair mortar	Protect anodes and cathodes throughout the structure or “ring anode” and added protection in repairs	\$
<b>Sika CNI</b>	New Construction	Protect anodes throughout the structure	\$
<b>Sika FerroGard 903, 908</b>	Low to medium chlorides, carbonation, early maintenance, ring-anode treatment, reduce moderate existing corrosion	Protect anodes and cathodes throughout the structure, reduce active corrosion	\$
<b>Sikagard Coatings</b>	Preventative on existing structures. Supplement to Sika FerroGard 903 and Sika Galvashield	Prevent ingress of chlorides, carbonation and water	\$
<b>Sika FerroGard 650, 670, 675</b>	Ring-anode protection; high chlorides where inhibitor may be limited	Protection of steel adjacent to patch, “ring anode” prevention	\$ \$

# Sika FerroGard® 903

## DESCRIPTION OF TECHNOLOGY

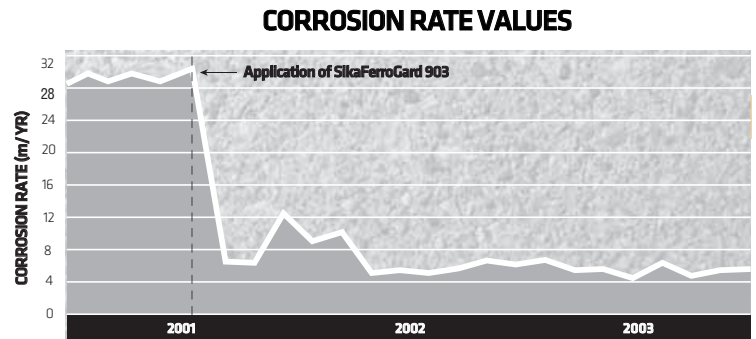
Surface-applied corrosion inhibitor that contains amino alcohols, organic and inorganic inhibitors.

## HOW IT WORKS

Sika FerroGard 903 is designed to penetrate hardened concrete, attach by adsorption to the reinforcing steel, form a protective layer on the steel resulting in the reduction of the corrosion rate.

## BEST USE

- Low to medium chloride content (typically less than 6 lb./cy at the level of the steel)
- Early maintenance
- Budget constraints
- Protection of areas particularly outside the area of the repairs
- Depth of steel and cover concrete permeability allow for adequate penetration



**TEST DATE**  
Monitoring and data provided by C-Probe Technologies Ltd.  
(MAVERICK BEACH RESORT)

## CASE STUDY

### PROJECT

Maverick Beach Resort, Ormond Beach, Florida

### DESCRIPTION OF STRUCTURE

The Maverick Beach Resort, built in the early 1970's, is a seven story, cast-in-place, conventionally reinforced concrete structure with a masonry façade located on the beach.

### PROBLEM

The balconies had been removed and replaced in 1987. This large building; however, continued to suffer from corrosion accelerated by chlorides. The source of the chlorides was salt spray from the sea water.

### SOLUTION

Delaminated concrete primarily along the edges of the elevated walkways and the columns was removed and repaired. Sika MonoTop 611, a one-component, polymer-modified, silica fume enhanced pumpable, pourable repair mortar was used along the walkways and SikaTop 123, a two-component, polymer-modified, non sag mortar containing Sika FerroGard was used for the column repairs. Achilles IES remote monitoring probes provided by C-Probe Technologies were installed to monitor the performance of the repair system. Sika FerroGard 903, a surface-applied, penetrating corrosion inhibitor was applied, primarily, to mitigate active corrosion in the unrepaired, chloride-contaminated areas of otherwise sound concrete. A waterproofing coating was also applied to prevent future ingress of moisture and chlorides and to prevent the steel's environment from getting increasingly worse.

