MIGRATORY CORROSION INHIBITOR (MCI®) PRODUCTS FOR CONCRETE

CASE HISTORY

Carbonation and Spalling of Concrete

PROBLEM
Carbonation and spalling of the concrete. MCI®-2020 containing a fugitive dye was sprayed on the entire structure including the parking garage. The structure has a bush hammered finish. This irregular finish acts to hold moisture, salt and volcanic emissions in the facade, leading to corrosion of embedded reinforcement. Since the project is located on a Pacific Island, a high degree of moisture laden trade winds strike the structure. In addition, over the last 10-12 years, Hawaii has experianced a high degree of volcanic activity which contributes to acid rain.

APPLICATION
MCI®-2020 with a fugitive dye was applied to the structure at 150ft^2/gal (3.68 m^2/L)

CONCLUSION
The process of determining which products would be used on the entire structure was made by doing a 6 month performance test of Cortec® and competitive products. Evaluated products were: SIKA Ferrogard® 903, Surtrete, Protectosil CIT (Dynasilane) and Chemtrete. The last two products were not included in the 6 month performance test as they were not considered as inhibitors for this project. A culmination of tests showed that 30 days after the application, noticeable drop off of inhibitor activity of all brands was uniform. After 60 days other brands continued to decline. Cortec® MCI®-2020 followed the trend, but at a much lower level of decline than the competition. After 90 days an additional drop off was recorded for other inhibitors, but Cortec's MCI®-2020's rate stayed consistant. At 180 days, MCI®-2020's rate remained consistant and actually showed an increase in the rate of reducing corrosion activity. Cortec® MCI® not only outperformed the other tested products, but also saved money due to the fact that MCI®-2020 does not etch glass, while other tested inhibitors do. No masking of windows was required, and there was no chance of a liability suit due to damaged automotive or building glass from other buildings in the general area.
(Estimated cost to mask the glass and then remove it after the project was finished on a building this size was $10 - $20,000.00 US.)

DATE
February 2003

CORTEC REP
Rich Moran - Corrosion Cops

CUSTOMER
Pacific Tower

LOCATION
Honolulu, Hawaii

PRODUCT
MCI®-2020

4119 White Bear Parkway, St. Paul MN 55110 USA
Phone (651)429-1100, Toll free (800) 4-CORTEC
Fax (651) 429-1122, Email: info@cortecvci.com
www.cortecvci.com

ch 245 8/04

CORTEC CORPORATION
Environmentally Safe VpCI®/MCI® Technologies