Neal Berke, PhD, FACI, FASTM, FNACE
Vice President, Research

EDUCATION

Ph.D. Metallurgical Engineering
University of Illinois, 1980
B.A., Physics
University of Chicago, 1974
Technology Management Program
Babson College, 1990

PROFESSIONAL ASSOCIATIONS

National Association of Corrosion Engineers
American Society of Testing Materials
American Society for Metals
Strategic Highway Repair Program
Acid Deposition Program
Transportation Research Board
American Concrete Institute
Center for Advanced Cement Based Materials
Effects on Reinforced Concrete Structures

RECENT PUBLICATIONS

Berke, N., Bucher, B., Little, D., and VonFay, K. (2016). Test Protocol to Evaluate the Effectiveness of Embedded Sacrificial Anodes in Reinforced Concrete. *NACE International Corrosion 2016,* Paper Number 7524, 10pp.

Berke, N., Bucher, B., Ade, K., and DeNicola, P. (2015). Protective Surface Treatments for New and Existing Steel Reinforced Concrete to Mitigate Corrosion. *Department of Defense—Allied Nations Technical Corrosion Conference,* Paper Number 2015-6454, 14pp.

Berke, N. and Vijayakumar, R. (2015) Case Studies for 100-Year Service Life Utilizing High Strength Low Chromium Reinforcing Bars. *NACE Service Life Conference*, 15pp.

Berke, N. and Sibbick, R. (2014). eds. Hihara, L., Adler, R., and Latanision, R. Cement and Concrete with Metals, Environmental Degradation of Advanced and Traditional Engineering Materials. *CRC Press*, 595-622.

Neal has over 40 years of materials engineering research experience at increasing responsibility levels. His background is extensive in corrosion, concrete technology, materials processing, inhibitor development, coatings, field evaluations, and experimental design.

Neal conducts contract research on materials and corrosion related areas, and consults on materials and corrosion related issues. He provides technical input to the Engineering Group at TCG.

The author of over one hundred publications, Neal, an expert in his field, holds 47 U.S. patents. He is an active participant and leader in numerous national and international organizations, panels, and conferences. He has provided presentations covering the corrosion of steel in concrete, the physical properties of concrete, concrete applications, the corrosion of metal matrix composites and the effects of microstructure on corrosion, the corrosion of metallic- coated steel and the process of coating steel, and directional solidification of metal alloys.

AREAS OF EXPERTISE AND ACCOMPLISHMENTS

Service Life Modeling

Duramodel® Life-Cycle Cost Program—Key to development with Grace Marketing
Life® 365—Member of advisory and beta test group
Stadium®Service Life Program—Company representative during SUMMA stage of development

Major Role in ASTM Standards

C 1202 (Rapid Chloride) • G 109 (Inhibitor Test Method in Concrete)
C 1552 (Inhibitor Specification) • G 180 (Inhibitor Electrochemical Test Method)
C 1609 (Toughness Testing) • C 1579 (Plastic Shrinkage)
C 876 (Corrosion Potential Method) • C 1760 (Concrete Conductivity)

Currently working on test method and specification for shrinkage reducing admixtures and chloride threshold.

Major Role in USBR Test Protocol

M-82 (M0820000.714): Standard Protocol to Evaluate the Performance of Corrosion Mitigation Technologies in Concrete Repairs

AWARDS

ASTM Frank E. Richart Award—2016
NACE International Fellow—2013
Jean-Claude Roumain Innovation in Concrete Award, ACI—2012
BSCES (ASCE Chapter) Herschel-Clemmons Paper Award—2010
ASTM Francis L. LaQue Award—2009
Honorary Member ASTM Committee C09—2009
Grace Award for Technical Excellence—2007
Grace Prolific Inventor Award and "Hall of Fame" Induction—2007
ACI Fellow—2005
Grace Premier Award—2000, 2002, 2006
ASTM Award of Merit—1999
Grace Construction Products Concrete Products Award of Excellence—1997

Additional awards and articles are available on the TCG Web site: tourneyconsulting.com

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