

Pipeline Integrity: Managing Corrosion, Preventing Failures, Reducing Costs

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CANADA

Abstract

Current trends in managing corrosion to prevent failures and reduce costs are reviewed. Examples from the pipeline industry that are discussed include studies on initiation and propagation of stress corrosion cracking, predicting the occurrence of hydrogen-induced cracking by comparing the susceptibility of the steel with the field parameters, and monitoring using intelligent systems online, in real time, all the time to detect and size corrosion before failure occurs. In general, managing corrosion must be regarded as an investment in asset protection. When corrosion is managed, the cost of failure by corrosion is saved. The convergence of technologies in corrosion control, sensors, instrumentation, software, and remote communications provides new opportunities to manage corrosion and reduce costs by monitoring online, in real time, all the time.

Biography

R. Winston Revie graduated from McGill University with the Bachelor of Engineering (Metallurgical) degree in 1966. After receiving the Master of Engineering (Materials) degree from Rensselaer Polytechnic Institute (R.P.I.) in Troy, New York, and the Ph.D. from M.I.T. in Cambridge, Massachusetts, he carried out postdoctoral studies at The Flinders University of South Australia and at The Australian National University in Canberra. He joined CANMET, in Ottawa, Canada, in 1978, and has focused his scientific efforts primarily on pipeline integrity since then. He is currently the Program Manager for Pipelines at the CANMET Materials Technology Laboratory in Ottawa.

He is the co-author of a widely-used university textbook, *Corrosion and Corrosion Control*, third edition (translated into Japanese, Russian, and Chinese). The fourth edition of this book was published in 2008. He is the Editor of *Uhlig's Corrosion Handbook*, Second Edition, published by John Wiley & Sons, Inc. in 2000. The Chemical Industry Press, in China, published the Chinese edition of the *Handbook* in 2005. In addition, he is the Editor of the *Wiley Series in Corrosion*, and he is a member of the Editorial Board of *Corrosion*, published by NACE International.

Dr. Revie is a Fellow of ASM International, of NACE International, and of the Canadian Institute of Mining, Metallurgy and Petroleum. He is a Past President of the Metallurgical Society of the Canadian Institute of Mining, Metallurgy and Petroleum, and he was on the Board of Directors of NACE International from 2006 to 2009. He is President of the NACE Foundation of Canada.



Chicago Regional Chapter

Tuesday
March 9, 2010

Location:

NIU Naperville campus
1120 E. Diehl Rd.
Room: 161 B
Naperville, IL 60563
Phone: (630) 577-9101

Tentative Schedule:

4:30-5:30 pm Executive Committee Meeting
5:30-6:30 pm Hospitality Hour
6:30-7:30 pm Dinner Followed by Presentation

Directions:

From I-88, exit Naperville Road going south. Turn right onto Diehl Road. Turn left on Centre Point Circle and then left into the NIU parking lot. Parking is free; no permits are needed.

***** RSVP by Friday, March 5th, 2010 *****

Pre-registration by Friday prior to meeting: \$10. Registration at door: \$15

Pre-registration for Students: Free. Registration at door for Students: \$5

To make your reservation, please go to <http://www.chicagoasm.org/>