WebCorr
CORROSION CONSULTING
SERVICES

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WebCorr Corrosion Consulting Services Presents

Stray Current Corrosion in DC Rail Transit Systems
- Identification, Detection, Mitigation, Monitoring and Prevention

Date: As published on website Venue: As published on website

Course Overview

Stray current corrosion poses a real risk to the rails, rail fasteners, tunnels, and other supporting structures. Among the many different types of corrosion, stray current corrosion is probably the most misused term by unqualified corrosion consultants worldwide who literally refer to any corrosion phenomenon beyond their comprehension as stray current corrosion. This mis-diagnosis often results in significant financial losses and serious safety lapses for facility owners and operators. This 3-day in-depth training course with hands-on sessions will give you the power to separate myth from fact on anything related to corrosion in general and stray current corrosion in particular. The course covers how to identify, detect, mitigate, monitor, and prevent stray current corrosion in DC rail transit systems.

This corrosion short course can be taken as online corrosion course, in-house training or on-site training corrosion course, and on-demand corrosion course. It can also be customized to meet the specific needs of your organization.

Who Should Attend

Managers, Engineers, Inspection and Maintenance personnel who are interested in stray current corrosion in DC rail transit systems.

Consultants and Failure Analysts who wish to update their knowledge in stray current corrosion in DC mass transit systems.

Course Outline

1. Introduction to Corrosion
   - 1.1 What is corrosion?
     - -Definition of Corrosion
   - 1.2 Corrosion in Action: Examples of Corrosion
   - 1.3 Corrosion and Society: Its economic, social, political and environmental impacts
   - 1.4 Basic Concepts in Corrosion

   - 1.5 Primer in Chemistry and Electrochemistry
   - 1.6 Understanding Electrochemical Cells
   - 1.7 Corrosion Terminologies and Conventions
   - 1.8 Exercise/Practical Session
2. Different Types of Corrosion
   - 2.1 How Many Types of Corrosion Are There?
     - 2.1.1 General Attack/Uniform Corrosion
     - 2.1.2 Galvanic Corrosion/De-Alloying
     - 2.1.3 Pitting Corrosion
     - 2.1.4 Crevice Corrosion
     - 2.1.5 Filiform Corrosion
     - 2.1.6 Intergranular Corrosion/Weld Decay
     - 2.1.7 Environmental Cracking
     - 2.1.8 Liquid Metal Embrittlement
     - 2.1.9 Hydrogen Damage
     - 2.1.10 Corrosion Fatigue
     - 2.1.11 Flow Assisted Corrosion: FAC/Erosion Corrosion/Cavitation
     - 2.1.12 Fretting Corrosion
     - 2.1.13 High Temperature Corrosion
     - 2.1.14 Microbiologically Influenced Corrosion
     - 2.1.15 Stray Current Corrosion
     - 2.1.16 AC Corrosion
   - 2.2 Exercise/Practical Session
3. Stray Current Corrosion
   - 3.1 What is stray current corrosion?
   - 3.2 How is stray current corrosion different from other types of corrosion?
     - 3.2.1 The Electrolysis Process
     - 3.2.2 Stray Current Corrosion vs. General Attack/Uniform Corrosion

Course Outline

- 3.2.3 Stray Current Corrosion vs. Galvanic Corrosion
- 3.2.4 Stray Current Corrosion vs. Crevice Corrosion
- 3.2.5 Stray Current Corrosion vs. Pitting Corrosion
- 3.2.6 Stray Current Corrosion vs. Corrosion Fatigue

3.3 Examples of Stray Current Corrosion in DC Mass Transit Systems

- 3.3.1 Stray Current Corrosion in Rails
- 3.3.2 Stray Current Corrosion in Rail Fasteners
- 3.3.3 Stray Current Corrosion in Tunnel Structures

3.4 Stray Current Corrosion Detection
3.5 Stray Current Corrosion Mitigation
3.6 Stray Current Corrosion Monitoring
3.7 Stray Current Corrosion Management Strategies

- 3.7.1 Corrosion Management Philosophy
- 3.7.2 Inspection and Monitoring for Stray Current
- 3.7.3 Utility Monitoring Programmes
- 3.7.4 Operational stray current management

3.8 Computer Software for Stray Current Corrosion Prediction and Assessment
3.9 Exercise/Practical Session
4. End of Course Examination

Course Registration

Please register online at www.corrosionclinic.com
Or use the form below (photocopies of this form may be used for multiple bookings).

Dr/Mr/Ms _____
Organization
_____

_____
Contact Person _____
Contact Dept _____
Telephone _____ Fax _____
Email _____

Payment should be made by TT or online banking. Currencies in Australian Dollar, Canadian Dollar, US Dollar, Euro and Sterling Pound can be transferred directly without conversion. Our bank details can be found at the link below:

https://www.corrosionclinic.com/payment.html

Course Fee and Discount

Standard: $3,500 **Discount**: $3,150

The fee includes a hardcopy of course note, certificate, light lunch, coffee breaks each day during the course.
Discount applies to a group of 3 or more persons from the same organization registering at the same time, or early-bird making payment at least 8 weeks before the course commencing date.

Cancellation and Refunds

Cancellation or replacement should be conveyed to WebCorr in writing (email or fax). An administration charge of 50% of the course fee will be levied if the cancellation notice is received from 14 to 7 days before the course commencing date. No refund will be made for cancellation notice received 6 days and less. No refunds will be given for no-shows. Should WebCorr find it necessary to cancel a course, paid registrants will receive full refund. Refund of fees is the full extent of WebCorr's liability in these circumstances.

WebCorr has NACE certified Corrosion Specialist (#5047) providing customized in-house training, online and distance learning corrosion courses, corrosion seminars and workshops on corrosion, materials, metallurgy, paints and metallic coatings. Our corrosion courses are developed and taught by NACE certified Corrosion Specialist with over 30 years of practical experience in the field. Our training success is measured by your learning outcome.