

WebCorr Corrosion Consulting Services Presents

Accelerated Low Water Corrosion (ALWC): -Mechanisms, Mitigation and Prevention

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

Course Overview

Accelerated low water corrosion (ALWC) is a severe form of localized corrosion attack on marine structures leading to premature perforation of steel pilings at the low water level. ALWC is a worldwide problem that results in extensive and costly repairs and maintenance works. This one-day corrosion course aims to provide the participants with a thorough understanding of the causes of accelerated low water corrosion, its recognition, treatment, mitigation, testing and monitoring, and prevention. Upon completion of this corrosion short course the participants will be able to recognize the characteristic pattern of ALWC and apply appropriate strategies and methods for the treatment and repair of steel pilings affected by accelerated low water corrosion. A guideline for the prevention of accelerated low water corrosion is also included in the course material.

This corrosion short course is available for in-house training, online and distance learning worldwide. It can also be customized to meet the specific needs of your organization.

Who Should Attend

Designer, engineers and inspectors in the marine and shipping industry, marine facility owners and operators, and anyone interested in accelerated low water corrosion (ALWC) of steel pilings, accelerated damage to ships and barges.

Course Outline

1. Introduction to Accelerated Low Water Corrosion (ALWC)
2. Mechanisms of Accelerated Low Water Corrosion (ALWC)
 - 2.1 The Corrosivity of Seawater
 - 2.2 Factors Influencing Corrosion
 - 2.3 Corrosion Zones in Marine Environment
 - 2.4 Bacteria Known to Cause Accelerated Low Water Corrosion
 - 2.4.1 Sulfate Reducing Bacteria (SRB)
 - 2.4.2 Sulphur-Oxidizing Bacteria (SOB)
 - 2.4.3 Iron Oxidizing Bacteria (IOB)



3. The Damaging Effects of ALWC on Maritime Structures
 - 3.1 Accelerated Low Water Corrosion of Steel Sheet Piles
 - 3.2 Accelerated Low Water Corrosion of Steel Tube Piles
 - 3.3 Accelerated Low Water Corrosion of Rolled Sections
 - 3.4 Accelerated Low Water Corrosion of Combi-Wall Construction
 - 3.5 Accelerated Low Water Corrosion on Rear Faces of Piles
 - 3.6 Accelerated Low Water Corrosion of Pontoons and Floating Structures
4. Treatment, Repair and Prevention of Accelerated Low Water Corrosion
 - 4.1 Repair Techniques for Structures Affected by ALWC
 - 4.1.1 Repair of Sheet Piles
 - 4.1.2 Repair of Tubular Piles
 - 4.1.3 Comparison of Underwater and Dry Repair Methods
 - 4.2 Electrochemical Treatment of Structures Affected by ALWC
 - 4.3 Prevention of Accelerated Low Water Corrosion
 - 4.3.1 Cathodic Protection
 - 4.3.2 Protective Coatings
 - 4.3.3 Coating in Combination with Cathodic Protection
 - 4.3.4 Concrete Jacketing/Encasement
 - 4.4 Design Against Accelerated Low Water Corrosion
5. Maintenance, Inspection and Monitoring of Accelerated Low Water Corrosion
6. Case Studies
7. 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: \$2,500 **Discount:** \$2,250

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-birds 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.

