

WebCorr Corrosion Consulting Services Presents

Corrosion Control and Prevention for Military Equipment and Systems

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

Course Overview

This two-day course will cover both the principles of corrosion and the practice of its control and prevention in the military service environments with the aim to increase the combat readiness/preparedness and the reliability of military equipment and systems, including military vehicles, ordnance systems, equipment and supporting systems operating on land, in air and in sea. This corrosion short course can be taken as in-house training course, online course and distance learning course worldwide. It can also be customized to meet the specific needs of your organization.

Who Should Attend

Engineers, designers, and QA/QC personnel working in defence and military industry.

Course Outline

- 1 Corrosion in the Defence Industry
 - 1.1 Corrosion: What it is
 - 1.2 Its economic, social, political and environmental impacts
 - 1.3 Corrosion & the military: Lessons of History
- 2 Basic Concepts in Corrosion
 - 2.1 Terminologies and conventions
 - 2.2 Why do metals corrode
 - 2.3 How do metals corrode
- 3 The Nature of Military Service Environment
 - 3.1 Effect of environment on the rate & forms of corrosion
 - 3.2 General classification of environments
 - 3.3 Classification of military service environments
 - 3.4 Atmospheric corrosion of military equipment and systems
- 4 Different Forms of Corrosion in Military Equipment & Systems
 - 4.1 Uniform corrosion
 - 4.2 Galvanic corrosion
 - 4.3 Dealloying and graphitization (graphitic corrosion)
 - 4.4 Intergranular stress corrosion cracking, weld decay and knife-line attack
 - 4.5 Exfoliation
 - 4.6 Crevice corrosion
 - 4.7 Pitting corrosion
 - 4.8 Filiform corrosion
 - 4.9 Microbiologically-Influenced Corrosion (MIC)
- 4.10 Environment-sensitive cracking
- 4.11 Hydrogen damages: hydrogen blistering, HIC, hydrogen embrittlement
- 4.12 Corrosion fatigue
- 4.13 Fretting
- 4.14 Erosion corrosion, impingement attack and cavitation damage
- 4.15 Stray current corrosion
- 5 Materials & Processes for Corrosion Control & Prevention in Military Equipment & Systems
 - 5.1 Materials selection & design
 - 5.2 Economic consideration
 - 5.3 Protective coatings for military applications
 - 5.4 Preservation of military equipment – comparison of various methods
 - 5.4.1 Classification of Military Service Environment
 - 5.4.2 Some key factors in preservation
 - 5.4.3 Controlled humidity
 - 5.4.4 Moisture and corrosion
 - 5.4.5 Sources of water in enclosures
 - 5.4.6 Barrier materials
 - 5.4.7 Water vapor transmission rate
 - 5.4.8 Basics of corrosion inhibitors
 - 5.4.9 Volatile corrosion inhibitors
 - 5.4.10 Corrosion preservation methods used by military organizations worldwide
 - 5.5 Corrosion Testing & Monitoring
 - 5.6 Corrosion and cathodic protection of underground pipelines
- 6 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.

