



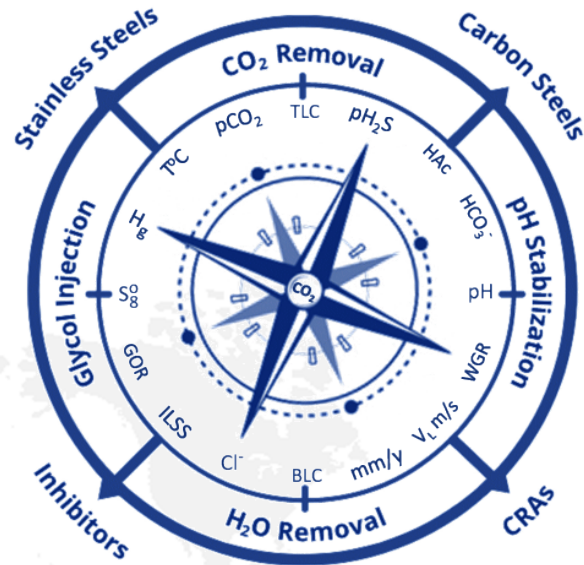
WebCorr Corrosion Consulting Services Presents

CO₂ Corrosion Modelling for the Prediction of Internal Corrosion in Oil and Gas Pipelines and Production Tubing

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

Course Overview

Carbon dioxide (CO₂) corrosion is a recognized integrity threat worldwide. CO₂ corrosion modelling has been used at both the design and operation phases of oil and gas pipelines and production tubing for the prediction of internal corrosion growth rates. Considerable gap exists between the prediction and the reality. This 5-day specialized practical course covers fundamentals of CO₂ corrosion, key factors influencing CO₂ corrosion, and all the details on CO₂ corrosion modelling for the prediction of internal corrosion in oil and gas pipelines and production tubing. Specifically, the course will cover the overview of a dozen of empirical and mechanistic carbon dioxide corrosion models, CO₂ corrosion model comparison, CO₂ corrosion model selection, CO₂ corrosion model validation and extensive hands-on modelling exercises. A practical guide for CO₂ corrosion modelling strategy is also presented.



Who Should Attend

- Contractors, Designers, Consultants involved in CO₂ Corrosion Prediction;
- Engineers and technologists in charge of pipeline integrity and production tubing corrosion;
- Technicians and maintenance personnel who deal with internal corrosion in oil and gas pipelines and production tubing;
- Facility owners and users who are concerned with internal corrosion in pipelines and production tubing.

Course Outline

1. Fundamentals of Corrosion
2. Key Factors Influencing CO₂ Corrosion
3. Overview of CO₂ Corrosion Models - What Models Are Available and How Are They Different?
4. CO₂ Corrosion Model Selection - Which Model / Type Is Suitable for My Pipeline/Production Tubing?
5. CO₂ Corrosion Model Comparison - Which Model /Type Is More "Accurate"?
6. Should the Amount of Liquid Water Affect the Corrosion Growth Rate Prediction?

7. Should I Use the Lab-Measured pH in the CO₂ Corrosion Models?
8. Should I Use the Water Analysis Results in the CO₂ Corrosion Models?
9. How to Model the Effect of H₂S, HAc, HCO₃-?
10. Should I Use One Model or Multiple Models?
11. How to Validate the CO₂ Model Results?
 - 11.1 The Need for CO₂ Corrosion Model Validation
 - 11.2 CO₂ Corrosion Model Validation Matrix
 - 11.3 CO₂ Corrosion Model Validation Index Score
 - 11.4 Quality Lab and Field Data for CO₂ Corrosion Model Validation
 - 11.5 Validate your current CO₂ model and determine its CO₂MoVIS score
12. CO₂ Corrosion Modelling Exercises: Case Studies, Case Studies and More Case Studies
 - 12.1 Which Model Consistently Under-Estimate the Corrosion Growth Rate?
 - 12.2 Which Model Consistently Over-Estimate the Corrosion Growth Rate?
13. Common Pitfalls in CO₂ Corrosion Modelling
14. End of Course Examination: A Real-Life CO₂ Corrosion Modelling Project

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: \$4,950 **Discount:** \$4,455

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.

