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](http://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](https://www.corrosionclinic.com/payment.html)

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**Course Fee and Discount**

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<th>Standard: $4,950</th>
<th>Discount: $4,455</th>
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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.

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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.