

WebCorr Corrosion Consulting Services Presents

API RP 581 Risk-based Inspection Methodology

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

Course Overview

API RP 581-2016 (3rd Edition) is the latest update on the Risk-based Inspection Methodology. This code provides (1) methods for developing an inspection plan for fixed equipment, including pressure vessels, piping, atmospheric storage tanks (AST), pressure relief devices (PRDs), and heat exchanger tube bundles; (2) quantitative methods for calculating the probability of failure (POF) for fixed equipment (the POF is based on the component type and damage mechanisms present based on the process fluid characteristics, design conditions, materials of construction, and the original construction code); (3) quantitative methods for computing the consequence of failure (COF). This 5-day course provides participants with a clear and thorough understanding of the quantitative procedures used to establish an inspection program using risk-based methods outlined in API 581. WebCorr's API RP 580 course is a prerequisite to this API 581 course (API 580 introduces the principles and presents minimum general guidelines for RBI while API 581 provides quantitative calculation methods to determine an inspection plan).

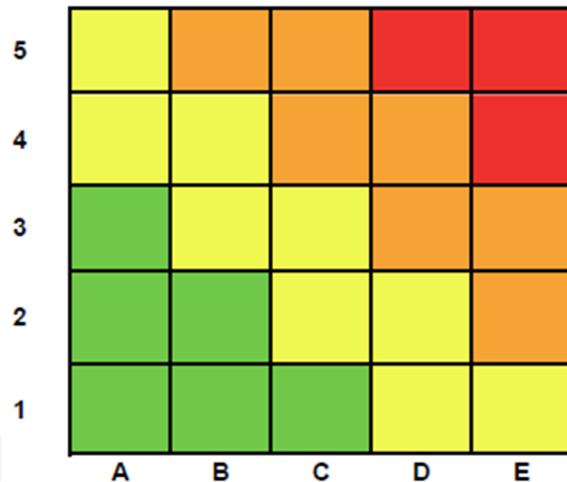
This 5-day corrosion short course is available for in-house training, on-site training, online and distance learning worldwide. It can also be customized to meet the specific needs of your organization.

Who Should Attend

Designers, engineers, inspection and maintenance personnel who are concerned with corrosion, process safety, mechanical integrity, and reliability in the various industries such as refining, petrochemical, chemical process, power, onshore and offshore industries.

Course Outline

1. Introduction to Mechanical Integrity and Risk
2. Scope of API 581
3. Inspection Planning Methodology
 - 3.1 Probability of Failure
 - 3.2 Consequence of Failure
 - 3.3 Risk Analysis



- 3.4 Inspection Planning Based on Risk Analysis
- 3.5 Pressure Vessels And Piping
- 3.6 Atmospheric Storage Tanks
- 3.7. Pressure Relief Devices
- 3.8 Heat Exchanger Tube Bundles
4. Probability of Failure Methodology
 - 4.1 Probability of Failure Methodology
 - 4.2 Thinning Damage Factor
 - 4.3 Component Lining Damage Factor
 - 4.4 SCC Damage Factor – Caustic Cracking
 - 4.5 SCC Damage Factor – Amine Cracking
 - 4.6 SCC Damage Factor – Sulfide Stress Cracking
 - 4.7 SCC Damage Factor – HIC/SOHIC-H₂S
 - 4.8 SCC Damage Factor – Alkaline Carbonate SCC
 - 4.9 SCC Damage Factor – Polythionic Acid SCC
 - 4.10 SCC Damage Factor – Chloride SCC
 - 4.11 SCC Damage Factor – Hydrogen Stress Cracking-HF



- 4.12 SCC Damage Factor – HIC/SOHIC-HF
- 4.13 External Corrosion Damage Factor
- 4.14 Corrosion Under Insulation Damage Factor
- 4.15 External Chloride SCC Damage Factor
- 4.16 External Chloride SCC Under Insulation Damage Factor
- 4.17 High Temperature Hydrogen Attack Damage Factor
- 4.18 Brittle Fracture Damage Factor
- 4.19 Low Alloy Steel Embrittlement Damage Factor

- 4.20 885°F Embrittlement Damage Factor
- 4.21 Sigma Phase Embrittlement Damage Factor
- 4.22 Piping Mechanical Fatigue Damage Factor
- 5. Consequence of Failure Methodology
 - 5.1 COF for Atmospheric Storage Tank Bottoms & Shell Courses
 - 5.2 Consequence of Failure – Level 1
 - 5.3 Consequence of Failure – Level 2
 - 5.4 Consequence Of Failure – Atmospheric Storage Tanks

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 _____
Tel _____ 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: \$3500 **Discount:** \$3150

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.

