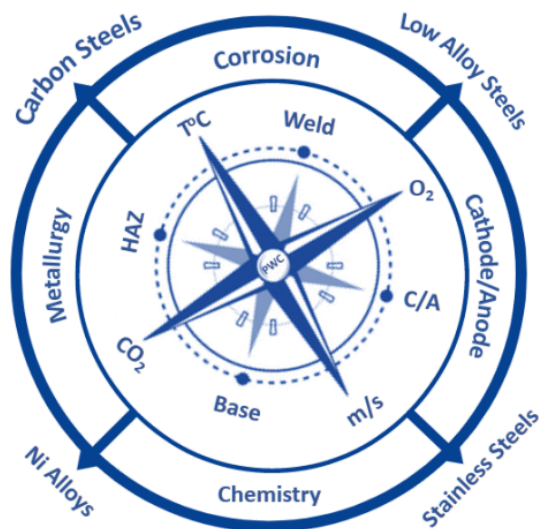




Corrosion Modeling Software and Corrosion Prediction Software Series

PWC-Compass®: A Software Tool for Modeling and Prediction of Preferential Weld Corrosion

The Ultimate Software Solution to Industrial Corrosion

Version 13.5

★ Performance ★ Functionality ★ Usability



Anytime

Anywhere

Any Device

Any OS

No USB dongles

No installation

No Browser Plug-ins

Contact Us for Licensing Details

Why WebCorr | Performance Guarantee | Unparalleled Functionality | Unmatched Usability | Any Device Any OS | Free Training & Support | CorrCompass

Overview of PWC-Compass: Software Tool for Modeling and Prediction of Preferential Weld Corrosion

PWC-Compass is the only device and OS independent software tool on the market for the modeling and prediction of preferential weld corrosion (PWC). Design engineers, welding engineers, engineering consultants, maintenance and inspection personnel can quickly

assess the impact of filler metal chemistry on the risk of preferential weld corrosion anytime, anywhere, on any device running any OS without the need to install or download anything (Figure 1).



PWC-Compass®: Modeling and Prediction of Preferential Weld Corrosion										Version 13.5.4
Equipment	XYZ Pipeline					Material	Carbon Steels		Grade	X52
Composition, wt%	C	Cr	Cu	Mn	Mo	N	Ni	Si	V	W
Base Metal	0.1200	0.1000	0.3000	1.2100	0.0000	0.0000	0.0900	0.2900	0.0000	0.0000
Weld Metal	0.2600	0.0300	0.0200	1.3000	0.0000	0.0000	0.0500	0.3400	0.0000	0.0000
Risk of Preferential Weld Corrosion						Moderate Risk				
Location of Corrosion						Weld This is the anode.				
Type of Corrosion Expected						General Corrosion				
Comments						Adjust filler metal chemistry to reduce the risk of PWC.				



Figure 1 PWC-Compass Models and Predicts the Risk of Preferential Weld Corrosion.

Outputs from PCW-Compass include the following:

1. The risk of preferential weld corrosion: no risk; low risk, moderate risk, high risk
2. The location of corrosion: weld metal; HAZ/parent metal
3. The anode
4. The type of corrosion expected: general corrosion; localized corrosion
5. Comments on reducing the risk of PWC

PWC-Compass®: Modeling and Prediction of Preferential Weld Corrosion										Version 13.5.4
Equipment	XYZ Pipeline					Material	Carbon Steels		Grade	X52
Composition, wt%	C	Cr	Cu	Mn	Mo	N	Carbon Steels	V	W	
Base Metal	0.1200	0.1000	0.3000	1.2100	0.0000	0.0000	Low Alloy Steels	0.0000	0.0000	
Weld Metal	0.2600	0.0300	0.0200	1.3000	0.0000	0.0000	Stainless Steels	0.0000	0.0000	
							Nickel-Base Alloys	0.0000	0.0000	
Risk of Preferential Weld Corrosion						Moderate Risk				
Location of Corrosion						Weld This is the anode.				
Type of Corrosion Expected						General Corrosion				
Comments						Adjust filler metal chemistry to reduce the risk of PWC.				



Figure 2 PWC-Compass Models and Predicts Preferential Weld Corrosion in Carbon Steels, Low Alloy Steels Stainless Steels, and Nickel Alloys.

The powerful applications of PWC-Compass are truly unlimited in engineering design, filler metal selection and optimization, materials compatibility assessment, trouble-shooting process-related issues and failure

analysis of components and systems. If the risk of PWC is high, the corrosion rate of the weld or the parent metal in various service environments can be accurately predicted with the following specialized corrosion modeling and prediction software (click the title to view detailed features and application examples):

1. **ABC-Compass:** Ammonium Bisulfide Corrosion Modeling and Life Prediction
2. **ACE - Apps for Corrosion Engineers:** A Collection of Essential Corrosion Software Applications for Corrosion Engineers, Corrosion Researchers, and Corrosion Technicians in Laboratories and in Fields
3. **ACMF-Compass:** Modeling and Prediction of the Effects of AC and Magnetic Field on Metal Corrosion
4. **ANC-Compass:** Modeling and Prediction of Ant Nest Corrosion (Formicary Corrosion) in Copper Tubes
5. **Atmosphere-Compass:** Prediction and Modeling of Atmospheric Corrosion of Metals and Alloys
6. **CCC-Compass:** Modeling and Prediction of Caustic Corrosion and Caustic Stress Corrosion Cracking
7. **CIPAL-Compass:** Copper-Induced Pitting in Aluminium Alloys - Modeling, Life Prediction and Process Control
8. **Cl2Compass:** Modeling and Prediction of Corrosion by Dry Chlorine Gas
9. **CO2Compass:** Modeling and Prediction of Corrosion by Carbon Dioxide (CO₂), Hydrogen Sulfide (H₂S), Acetic Acid (HAc), Elemental Sulfur (S), and Mercury (Hg) in Oil and Gas Pipelines and Production Tubing
10. **Concrete-Compass:** Concrete Corrosion Prediction and Modeling
11. **CP-Compass-Pipeline:** Cathodic Protection Design Calculations, Verification, Assessment and Solution for Underground Pipelines
12. **CP-Compass-Concrete:** Design Calculations for Cathodic Protection of Reinforced Concrete Structures
13. **CRA-Compass:** Corrosion Modeling and Corrosion Prediction for Corrosion Resistant Alloys - the Threshold Temperature and Chloride Concentration for Pitting, Crevice Corrosion, and Stress Corrosion Cracking (SCC)
14. **CSR-Compass:** Modeling and Remaining Life Prediction of Creep and Stress Rupture of Boiler and Heater Tubes
15. **CUI-Compass:** Prediction and Risk Assessment of Corrosion Under Insulation and Fireproofing
16. **Dew-Point-Compass:** Prediction of Dew Point Temperatures of Flue Gases and the Risk of Dew Point Corrosion
17. **DWD-Compass:** Modeling and Life Prediction of Corrosion in Drinking Water Distribution Systems
18. **EN-Compass:** Modeling and Prediction of the Corrosion Resistant Properties of Electroless Nickel Coatings
19. **EVS-Compass:** Extreme Value Statistics in Corrosion Modeling and Corrosion Life Prediction of Structures and Plant Assets
20. **F2Compass:** Modeling and Prediction of Corrosion by Dry Fluorine Gas
21. **FAC-Compass:** Erosion Corrosion and Flow - Accelerated Corrosion Modeling, Life Prediction and Materials Selection in Water-Steam Systems
22. **FuelAsh-Compass:** Fuel Ash Corrosion Modeling and Life Prediction of Boiler and Heater Tubes
23. **GC-Compass:** Galvanic Corrosion Prediction and Materials Compatibility Assessment

24. **H2Compass:** Modeling and Prediction of Low Temperature Hydrogen Damages (Hydrogen Blistering, Hydrogen-Induced Cracking, Hydrogen Embrittlement) and High Temperature Hydrogen Attack (HTHA)
25. **H2O-Compass:** Modeling and Prediction of Water Corrosivity and Scaling Tendency
26. **H2SO4-Compass:** Corrosion Prediction and Materials Selection Guide for Sulphuric Acid (H2SO4) Services
27. **HBr-Compass:** Corrosion Prediction and Materials Selection Guide for Hydrobromic Acid (HBr) Services
28. **HCl-Compass:** Corrosion Prediction and Materials Selection Guide for Hydrochloric Acid (HCl) Services
29. **HF-Compass:** Corrosion Prediction and Materials Selection Guide for Hydrofluoric Acid (HF) Services
30. **ISO15156-Compass:** Modeling and Prediction of in-situ pH, Region of Environmental Severity, and Susceptibility to Sulfide Stress Cracking (SSC) of Carbon and Low Alloy Steels
31. **MIC-Compass:** Modeling and Prediction of Microbiologically Influenced Corrosion in Oil and Gas Pipelines
32. **MSC -Compass:** Modeling and Prediction of Molten Salts Corrosion in TES and MSR Applications
33. **NAC-Compass:** Modeling and Prediction of High Temperature Naphthenic Acid Corrosion
34. **NH3Compass:** Modeling and Prediction of Corrosion in Ammonia Production, Storage, and Transport
35. **O2Compass:** Modeling and Prediction of High Temperature Oxidation
36. **OCTG-Compass:** Corrosion Prediction and CRA Materials Selection Guide for Oil and Gas Production Systems
37. **PCW-Compass:** Corrosion Prediction and Modeling in Process Cooling Water Systems
38. **PipelineCompass:** Pipeline Corrosion Modeling, Prediction, Assessment and Solutions
39. **PWC-Compass:** Modeling and Prediction of Preferential Weld Corrosion
40. **S-Compass:** Modeling and Prediction of High Temperature Sulfidation/Sulfidic Corrosion/H2-H2S Corrosion and Low Temperature Elemental Sulfur Corrosion
41. **SC-Compass:** Stray Current Corrosion and AC Corrosion - Identification, Assessment and Prediction
42. **Seawater-Compass:** Seawater Corrosion Prediction for Metals and Alloys
43. **Shipwreck-Compass:** Shipwreck Corrosion Modeling and Corrosion Prediction
44. **Soil-Compass:** Soil Corrosion Prediction and Modeling for Metals and Alloys
45. **SPE-Compass:** Solid Particle Erosion Modeling and Prediction
46. **VPC-Compass:** Prediction and Modeling of Internal Corrosion in Vapor Phase in Closed Systems
47. **VPC-Compass-SE:** Prediction and Modeling of Corrosion in Microelectronic Packages
48. **WebCorr Corrosion Rate Units Converter:** Converting Between All Corrosion Rate Units for All Metals and Alloys

Click [here](#) to contact us for licensing details and experience the power of corrosion modeling and prediction software.

PWC-Compass, giving you the right directions in Modeling and Prediction of Preferential Weld Corrosion.