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Metallic Coatings & Paints

[Typical Services](#) || [Training Courses](#)

WebCorr has [NACE certified Corrosion Specialist \(#5047\)](#) providing customized corrosion [training courses](#), [expert witness](#) and litigation support, corrosion [consultancy](#) and [failure analysis](#) services related to paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing or diffusion coating.

Some of the professional services that we provide are:

- Selection of coatings and paints to meet your project requirements
- Review of technical specifications on your coatings related project to identify potential corrosion failures, compatibility and performance of coatings, and any clauses in the specification that may lead to potential dispute, arbitration or litigation between the contractors and and facility owners. Corrosion liability can be avoided through proper specifications.
- Coatings inspection and performance evaluation
- Quality assessment of anodized aluminum (anodic coatings), chromate and phosphate coatings
- Optimization of process parameters in coatings operations
- Trouble-shooting of process-related issues
- Measurements of impedance and or admittance of anodized aluminium in accordance with relevant ASTM, BS and ISO standards
- Coatings failure analysis & paints failure analysis
- Verification and measurements of seal quality and seal value of anodized coatings using electrochemical impedance spectroscopy (EIS) and equivalent circuit modeling.
- Verification and assessment of surface preparation standard of coated steel structure for its compliance with contract
- Failure analysis and trouble-shooting of anodizing, chromating, galvanizing, phosphating, electroplating and electroless plating processes and metallic coatings.
- Testing and equivalent circuit modeling of coatings with electrochemical impedance spectroscopy (EIS)
- Life prediction of paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing
- Failure analysis of paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing
- Expert witness and assistance in litigation and arbitration matters related to paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing or diffusion coating.

Typical Services Provided to Clients:

- Evaluation and condition assessment of the performance of coatings used in weaponry systems by Electrochemical Impedance Spectroscopy (EIS)
- Failure analysis of composite in military vehicles
- Coatings selection for marine applications
- Assessment of damage to fresh water tank coatings due to sea water flooding onboard a ship
- Coatings failure analysis of ballast tanks onboard an oil tanker
- Expert witness in an arbitration matter related to surface preparation of steel piles and coatings
- Verification and assessment of surface preparation on a coated steel structure for compliance with contract
- Assessment and evaluation of hot-dip galvanized steel parts used in slope stabilization structures
- Life prediction of hot-dip galvanized coatings
- Measurements of impedance and admittance (seal value) of sealed anodized aluminum
- Failure analysis of chromated aluminum parts
- Assessment of the corrosion resistance of electroless Ni-P coatings on aluminum substrate
- Investigation of the effect of alloying elements on the corrosion resistance of electroless nickel (Ni-P-Cu, Ni-P-Mo and Ni-P-Sb)
- Assessment of the corrosion resistance of gold and gold-PTFE plating in printer inks
- Evaluation of the shelf life and the corrosion resistance of Al-based wafer in process chemicals
- Corrosion diagnosis and failure analysis of electroless nickel plating in an offshore oil drilling rig installation
- Expert witness in a litigation case related to corrosion of silver coatings on mirrors

Corrosion Training Courses Related to Coatings:

The following corrosion training short courses are related to coatings. They can be conducted at any time for you as in-house training courses, online courses or distance-learning courses. Public corrosion short courses, seminars and workshops are also conducted regularly. The schedule of public corrosion courses for the current year is available [here](#).

- [Protective Coatings: Inspection, Maintenance and Repair](#)
- [Electrochemical Impedance Spectroscopy - Measurement, Modeling, Data Interpretation and Applications](#)
- [Electrochemical Processes in Metal Plating](#)