

# Combating Corrosion



**A one day technical course** describing the various mechanisms by which metals and alloys corrode and technologies for preventing it.

## Course aims

To provide delegates with a full understanding of the principles of metallic corrosion and prevention mechanisms appropriate to a variety of applications.

## Who should attend

Engineers and designers of all disciplines involved in the supply of metals and alloys to industries in which corrosion is an issue. The course is also applicable to production and technical staff concerned with the specification, selection and application of corrosion-resistant materials.

**“Very knowledgeable and enthusiastic presenters.”**

Rachel Wheatley,  
Rolls-Royce

**“Very good style and encourages interaction”**

Rob Lambert,  
TATA Steel

**Find out more:** For further information please contact

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# Combating Corrosion



## Mechanisms & Forms of Corrosion

- Pitting corrosion
- Crevice corrosion
- Galvanic corrosion
- Stress-corrosion cracking
- Hydrogen induced cracking
- Erosion corrosion
- Microbial corrosion

## Applications

- Offshore
- Carbon dioxide
- Hydrogen sulphide
- Fatigue/corrosion in aircraft

## Inspection & Testing Techniques

- Visual inspection
- X-ray inspection
- Optical metallography
- Scanning electron microscopy
- ASTM G48 methods A & B
- Salt spray testing

## Designing to Prevent Corrosion

- Environment
- Crevices
- Inhibitors

## Corrosion Prevention Technologies

- Organic coatings & paints
- Galvanising
- Zinc plating
- Noble coatings
- Nickel & chromium plating
- Anodic & cathodic protection

## Case Studies

- BP Foinavon
- Seawater Circulating Pump

## LEARNING OUTCOMES

- Explain the basic principles of corrosion
- Identify corrosion mechanisms that can occur in aqueous & gaseous environments
- Describe the processes for prevention of corrosion
- Knowledge of corrosion resisting metals & alloys
- Identify, limit or prevent corrosion

