



Corrosion protection – theory and practice. Materials corrosion and how to avoid it

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Description:

1. Introduction – what is corrosion?
 - 1.1. Electrochemistry of corrosion
 - 1.2. Electrochemical series
 - 1.3. Corrosion environment and pH
2. Corrosion types and corrosion in different environments
 - 2.1. Corrosion in air
 - 2.2. Corrosion in water
 - 2.3. Corrosion in soil
3. Protection against corrosion
4. Correct selection of materials and design to reduce corrosion
5. Paints and coatings
 - 5.1. Surface preparation
 - 5.2. Application equipment
 - 5.3. Pretreatment
 - 5.4. Chemical conversion coatings
 - 5.5. Paint coatings materials
 - 5.6. Coating failures
 - 5.7. Water-borne paints
6. Cathodic protection
7. Corrosion inhibitors
8. Corrosion monitoring
9. Corrosion of concrete and steel in reinforcement concrete
10. Metallic coatings
11. Electrodeposited metal coatings
12. Hot dip galvanizing
13. Testing methods in corrosion science
 - 13.1. Coupon methods
 - 13.1. Polarization curves
 - 13.2. Electrochemical impedance spectroscopy
 - 13.3. Linear polarization method
 - 13.4. Identification of corrosion products
14. Standards in corrosion
15. High temperature corrosion



Terminy wykładów			
Data	Dzień tyg.	Godzina	Sala
2015-03-23	Pn	9.15-12.00	Mech 303
2015-03-24	Wt	9.15-12.00	Mech 303
2015-03-25	Śr	9.15-12.00	Mech 303
2015-03-26	Cz	9.15-12.00	Mech 303
2015-03-27	Pt	9.15-12.00	Mech 303