# **Corrosion Atlas Volume II Classification of the Case Histories**

# Main Classification: By Materials

1. Steel alloys

2. Stainless steel alloys

3. Aluminium alloys

4. Copper alloys

5. Nickel alloys

6. Titanium alloys

7. Tin and Lead alloys, including solder materials

8. Zinc alloys

9. Magnesium alloys

10. Noble materials, e.g. Gold, Silver, Platinum, etc

11. Semiconductor based alloys, e.g. Silicon, Germanium, Gallium, etc

12. Silica based materials, e.g. glass

13. Refractory and ceramic materials, e.g. Zirconium, Tungsten, etc

14. Polymers and synthetic rubber

15. Concrete and cement mortar linings

16. Wood

17. Others

# First Subclassification: By Systems

1. Agricultural and Farming
2. Antibacterial, Biological and Medical (Hospitals and Medical Research Center)
3. Chemical Solutions (Extraction, Production, Storage and Transportation)
4. Cleaning (Baths and Kitchens)
5. Cutting and Abrasives
6. Electrical and Electronic Components
7. Fire Extinguisher
8. Gases
9. Laboratory Equipment
10. Lubrication
11. Mining
12. Molten and Liquid Metals
13. Nuclear and Irradiation
14. Oil and Petroleum
15. Power Generation
16. Refrigerant and Coolant Gases

Roads and Structural Constructions

1. Ships and Marine Installations
2. Space and Aerospace
3. Steam and Hot Water
4. Water, Tap and Drinking Water
5. Vacuum and compressed air
6. Vehicles, Motorbikes, and Trains
7. Waste and Incinerators
8. Wastewater
9. Welded Structures
10. Others …

# Second Subclassification: By Phenomena

1. Acid Corrosion
2. Ageing
3. Atmospheric and Aqueous Corrosion
4. Caustic Corrosion
5. Cavitation Damage
6. Chelant Corrosion
7. Coating Failures
8. Corrosion Fatigue
9. Corrosion Under Insulation (CUI)
10. Creep and Thermomechanical Failures
11. Crevice Corrosion
12. Degradation of Non-Metallic Materials
13. End Grain Attack
14. Erosion Corrosion
15. Filiform Corrosion
16. Fretting Corrosion
17. Galvanic Corrosion
18. General or Uniform Corrosion – Weight Loss
19. Halide Corrosion
20. Heat Flux Corrosion
21. High Temperature Corrosion
22. Hydrogen Damage
23. Intergranular Corrosion
24. Liquid Metal Embrittlement
25. Microbiologically Influenced Corrosion
26. Oxidation
27. Pitting Corrosion
28. Rusting
29. Selective Leaching
30. Steam Blanketing
31. Stray Current Corrosion
32. Stress-Corrosion Cracking
33. Sulfide Corrosion
34. Underdeposit Corrosion
35. Whiskers and Filaments