



## **Corrosion Inhibitors**

Corrosion inhibitor is a substance which reduces the rate of corrosion of a metal, when they are added to the corrosive environment. There are three different types of corrosion inhibitors

- i) Anodic inhibitors
- ii) Cathodic inhibitors
- iii) Vapour phase inhibitors

### **i) Anodic Inhibitors**

Anodic inhibitor is a chemical substance which prevents the corrosion reaction at the anode by the modification of anodic surface as insoluble compound.

Example: molybdates, chromates, nitrates, phosphates, tungstates, or other ions of transition elements with high oxygen content.

### **ii) Cathodic Inhibitors**

Cathodic inhibitor is a substance which prevents the corrosion reaction at the cathode by the modification of cathodic surface.

Examples: Amines, pyridines, mercaptans, heterocyclic nitrogen compounds, substituted urea and thiourea)

### **iii) Vapour phase inhibitors (VPI)**

They are easily vaporizable organic substances, which readily vaporize and form a protective layer on the metal surface. They are conveniently used to prevent corrosion in closed spaces like storage containers, packing materials, sophisticated equipments, etc.

**Examples:** Dicyclo hexyl ammonium nitrate, dicyclo hexyl ammonium chromate, benzo triazole, phenyl thiourea, etc.