Chapter 2

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Several condensation products of aldehydes and amines both aliphatic and aromatic in nature and some aromatic Schiff's bases have been reported as inhibitors for the corrosion of iron in acidic media. Yet these studies do not cover all types of compounds and few of the effective inhibitors belonging to this class are patented and much information is not available. Hence in the present work, some aldimines that are the products of condensation of 1,2-diaminoethane and 1,3-diaminopropane with few aliphatic aldehydes and aromatic aldehydes are to be synthesised, characterised and evaluated for their corrosion inhibition performance in HCl and H₂SO₄ media.

UV-Visible and IR studies are to be made to characterise the inhibitors. Weight loss, gasometry, potentiostatic polarization, impedance and hydrogen permeation studies are to be made to evaluate their inhibition efficiencies. Optical microscopic studies are to be made to confirm the surface coverage by the inhibitors.

While assessing the performance of the inhibitors, the effect of inhibitor concentration, is to be studied. From the electrochemical studies, the mechanism of inhibition of these inhibitors is to be proposed.