



Inhibitive effect of *Bauhinia tomentosa* leaf extract on acid corrosion of mild steel

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Abstract : Corrosion inhibitive properties of *Bauhinia tomentosa* leaf extract (BTLE) in 1N H₂SO₄ was investigated by weight loss method and electrochemical techniques. Inhibition efficiency of BTLE was found to increase with increasing concentration. The effect of temperature on the corrosion inhibition of mild steel in the temperature range of 30 - 60 °C was carried out. Polarization measurements revealed that the BTLE acted as a mixed type inhibitor. Nyquist plots showed that on increasing the BTLE concentration, the charge transfer resistance increased and double layer capacitance decreased. The adsorption of BTLE on mild steel obeyed the Temkin isotherm. The maximum inhibition efficiency was found (86.63 % in H₂SO₄) at 30 °C in the presence of 700 ppm of BTLE. The adsorption of BTLE on mild steel surface was characterized by UV-visible and SEM studies.

Keywords : *Bauhinia tomentosa*, SEM, FT-IR, Corrosion inhibition.

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