CORROSION INHIBITION OF CARBONE STEEL IN ACIDIC SOLUTION
BY A GREEN INHIBITOR


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Abstract

The extract of plant (IVE) has been evaluated as a corrosion inhibitor for Carbone steel in 1M HCl solution by means of potentiodynamic polarization and electrochemical impedance spectroscopic measurements. Tafel polarization studies reveal that IVE acts as an efficient mixed inhibitor. Nyquist plots showed that on increasing the IVE concentration, the charge-transfer resistance increased and double-layer capacitance decreased. Mechanism of corrosion inhibition of IVE on Carbone steel is explored with the help of SEM technique.

Keywords: corrosion inhibition, Carbone steel, acid corrosion, polarization, EIS, SEM.