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Corrosive Behavior Of Metal Alloy in Acidic Medium Presence of Inhibitor

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ABSTRACT

Amoxicillin is a corrosive inhibitor of metal alloys in acid medium was studied by Non electrochemical techniques (weight loss method) and electrochemical techniques by polarization techniques, and electrochemical impedance spectroscopy, corrosive product of metal alloys analyzed by XRD, field emission microscopy and energy dispersive spectroscopy results obtained revealed that the amoxicillin is good corrosive inhibitor in acidic medium. Polarization studies showed that the amoxicillin compound is mixed type of corrosive inhibitor, the electrochemical impedance studies showed that the decrease the corrosion rate of metal alloys ,these amoxicillin were adsorbed on metal alloys surface follow Langmuir adsorption isotherm. The effect of oxygenation on the corrosion behavior of metal alloys in acidic medium in presence of definite concentration of the amoxicillin.

Keywords: Metal corrosion, Potentiodynamic polarization, electrochemical impedance.