Use of a Palm Oil-Based Imidazoline as Corrsion Inhibitor for Copper in 3.5% NaCl Solution

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A palm-oil modified hydroxyethyl imidazoline has been used as corrosion inhibitor for Cu in 3.5 % NaCl solution by using potectiodynamic polarization curves, linear polarization resistance (LPR) and electrochemical impedance spectroscopy (EIS) measurements. Results showed that modified imidazoline acts as good inhibitor for Cu and its efficiency increases with increasing its concentration and exposure time. It was found that modified imidazoline contains compounds with heteroatoms within their molecular structure which act as sites to be chemically adsorbed on to the Cu surface, by following a Langmuir type of isotherm, to form protective corrosion products.

Keywords: copper, corrosion, imidazoline.

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