

Corrosion Inhibition of Mild Steel in 20% Sulfuric Acid

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Abstract : The effect of iodide ions on the corrosion inhibition of mild steel in 20% sulfuric acid in the presence of 3-méthylthio-5-p-méthoxyphényl-1,2-dithiolylium against anion (I-) A1 synthesized in our laboratory, was studied by different electrochemical techniques such as electrochemical impedance spectroscopy, potentiodynamic polarization. The obtained results showed that A1 effectively reduces the corrosion rate of steel. The adsorption of 3-méthylthio-5-p-méthoxyphényl-1,2-dithiolylium against anion (I-) followed Langmuir and temkin adsorption isotherm.

Keywords : steel XC52, corrosion, inhibition, 3-méthylthio-5-p-méthoxyphényl-1,2-dithiolylium against anion (I-) , sulfuric acid

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