Role of Some Organic Compounds as Corrosion Inhibitors for 316L Stainless Steel in 1 M HCl

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The corrosion inhibitors, namely, (E)-3-oxo-2-(m-tyldiazenyl) pentanenitrile compound (A), (E)-3-oxo-2-(phenyldiazenyl) pentanenitrile compound (B) and (E)-3-(phenyldiazenyl) pentane -2,4-dione compound (C) were influence on the corrosion of SS 316L in 1 Molar hydrochloric acid has been detected by utilized mas reduction, (EFM)electrical frequency modulation, tafel polarization, (EIS) method. Polarization value lead to this organic compound plays as mixed inhibitors kind. The temperature effect on corrosion protection had research on the adsorption parameters and activation thermodynamic measured. EIS was utilized to detect the technique of corrosion protection. EFM can be utilized a fast and non destructive test for record rate of corrosion. The adsorption follow Temkin's isotherm.

Keywords: SS 316L; HCl; organic derivatives, EFM; EIS

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