

Synthesis and characterization of benzoin α -oxime and 2,6-pyridine dimethanol and its application of anti-corrosion behaviour

G. Kavitha^a and C. Vedhi^{b*}

^aDepartment of Chemistry, Rajalakshmi Institute of Technology, Kuthambakkam-600 124, Tamilnadu, India

^bDepartment of Chemistry, V.O. Chidambaram College, Thoothukudi-628 008, Tamilnadu, India

E-mail: cvedhi@rediffmail.com, cvedhi23@gmail.com *Fax:* 91-461-2310275

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Synthesis of benzoin α -oxime and 2,6-pyridine dimethanol through eco-friendly method. These synthesized compounds are characterized by UV-Visible, FTIR and NMR spectral techniques. Anti-corrosion behaviour of benzoin α -oxime and 2,6-pyridine dimethanol both the compounds studied with 2 N sulphuric acid on mild steel. The anti-corrosion behaviour of the synthesized compounds was studied by subjecting to weight loss measurements, polarisation studies and electrochemical impedance spectra (EIS) for the assessment of its performance. The studies were made with 2 N sulphuric acid as the corroding medium, but with the inhibitors concentration in the range of 50–350 ppm. The results revealed that the inhibitor studied perform better in the medium and function by the mechanism of adsorption on the metal surface.

Keywords: Mild steel, sulphuric acid, benzoin α -oxime, 2,6-pyridine dimethanol.