

Electrodeposition of Corrosion resistant Nanostructured Ni-Fe Alloy Coatings

D. Rashmi^{1,2}, G. P. Pavithra¹, & B. M. Praveen²

¹Dept. of Chemistry, Alvas Institute of Engineering and Technology, Mijar, Moodbidri, 574225, India.

²Dept. of Chemistry, Srinivas University, College of Engineering and Technology, Mukka, Mangaluru, 574146, India.

ABSTRACT

Nanostructured Ni-Fe alloy coatings was developed on mild steel panels using electrolytic sulphate bath. The composition of the electrolytic bath and the experimental parameters were optimized. Corrosion behaviour of the developed Ni-Fe alloy coatings were evaluated in 3.5% NaCl solution using potentiodynamic polarization and electrochemical impedance spectroscopic techniques. Highest corrosion resistance was observed for coatings at 3 A dm⁻². Surface Morphology of the coatings was also characterised by SEM.

Keywords: Ni-Fe alloy, SEM, Corrosion resistance.

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