

## **Influence of Sodium Acetate on Electroless Ni-P Deposits and Effect of Heat Treatment on Corrosion Behavior**

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**Abstract :** The aim of our work is to develop an industrial bath of nickel alloy deposit on mild steel. The optimization of the operating parameters made it possible to obtain a stable Ni-P alloy deposition formulation. To understand the reaction mechanism of the deposition process, a kinetic study was performed by cyclic voltammetry and by electrochemical impedance spectroscopy (EIS). The coatings obtained have a very high corrosion resistance in a very aggressive acid medium which increases with the heat treatment.

**Keywords :** cyclic voltammetry, EIS, electroless Ni-P coating, heat treatment, potentiodynamic polarization

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