

عنوان مقاله:

Electrochemical and surface study of Ce- based Conversion Coating: Effect of pH and cerium salt concentration

محل انتشار:

چهارمین کنگره بین المللی پوشش های حمل و نقل (سال: 1393)

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خلاصه مقاله:

Corrosion properties of Ce- based conversion coating were investigated. Effects of influential parameters (pH and cerium salt concentration) were examined through utilizing potentiodynamic polarization measurements and electrochemical impedance spectroscopy (EIS) in 3.5 wt% NaCl. Obtained results clarify that the final corrosion performance of treated CRS substrates, is highly dependent upon pH and cerium salt concentration. It was shown that the sample coated in pH: 5 in the presence of 7.5 g/Lit CeCl₃ has had superior corrosion performance. Also, Field Emission Scanning Electron Microscopy test was carried out to do with appearance and surface structure of coated CRS plates in micro scale. Prepared image depicts that morphology of the surface has changed notably and conversion coating layer has formed monotonously. Keywords: Conversion Coating, Cerium salt, DC Polarization, Electrochemical Impedance Spectroscopy, Field Emission Scanning Electron Microscopy

کلمات کلیدی:

Conversion Coating, Cerium salt, DC Polarization, Electrochemical Impedance Spectroscopy, Field Emission Scanning Electron Microscopy

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