

عنوان مقاله:

Improvement the Corrosion Resistance of Cr / Ni Alloy Electroplating in 3.5% NaCl Solution

محل انتشار:

چهارمین کنفرانس بین المللی پژوهش های نوین در علوم مهندسی و تکنولوژی (سال: 1394)

تعداد صفحات اصل مقاله: 11

نویسندگان:

Seyed Mohsen Madani - *Graduate student of Materials Engineering, Department of Materials Engineering, Foolad Institute of Technology, Esfahan, Iran*

Ali Shafyei - *Associate Professor of Materials Engineering, Department of Materials Engineering, Foolad Institute of Technology, Esfahan, Iran*

Abbas Najafizadeh - *Professor of Materials Engineering, Department of Materials Engineering, Foolad Institute of Technology, Esfahan, Iran*

خلاصه مقاله:

The overall objective of this study is selecting an optimal method for the production of chromium/ nickel coatings to reduce the density and permeability of the surface cracks and provide good corrosion resistance. For this purpose, Cr and Ni electrodeposited from Cr(III) - Ni(II) bath on St-12 steel samples by using pulse current, according to the selective three methods. The microstructures of the coatings were studied by optical microscopy (OM) and scanning electron microscopy (FESEM). The coating corrosion resistance has been compared through electrochemical polarization in a 3.5% NaCl solution. Despite the high corrosion resistance for all three types of coatings; It also looks at the use of pulse current: corrosion resistance of multilayer alloy coatings are higher than double layer, and corrosion resistance of double layer alloy coatings are higher than the single layer.

کلمات کلیدی:

Electroplating, Chromium, Nickel, Corrosion, Crack

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/515275>

