

عنوان مقاله:

The Effect of Electroplating Time on Microstructural Properties and Hardness of Silver Coating on C10100 Alloy

محل انتشار:

مجله مواد دوستدار محیط, دوره 3, شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 5

نویسندگان:

A. Taherkhani - *Department of Materials Engineering, Central Tehran Branch, Islamic Azad University, Tehran, Iran*

Y. Shajari - *Institute of Materials and Energy, Meshkin Dasht, Karaj, Iran*

K. Mirzavand - *Department of Metallurgy and Materials Engineering, Imam Khomeini International University, Qazvin, Iran*

A. Mellatkah - *Department of Metallurgy and Materials Engineering, Ferdowsi University of Mashhad, Mashhad, Iran*

خلاصه مقاله:

In the present study, the effect of electroplating time on the intensity of flow and the constant potential difference on the thickness of the coating, surface smoothness, microstructure of the interface between substrate and coating and hardness of coating were investigated. Microstructural studies by optical microscopy (OM) showed that increasing the electroplating time leads to increase the coating thickness. Investigations showed that increasing the plating time due to growth leads to increase the surface roughness of coating. In the middle part of the coating, by increasing the time of plating, the thickness of eutectic Ag-Cu film increased. The results of microhardness of coatings showed that the maximum hardness was achieved at the highest planting time i.e 8 minutes. The microhardness remained at a constant range for about half a minute to two minutes, but increasing the time to 4 and 8 minutes leads to increase toughness of 107 and 131 Hv.

کلمات کلیدی:

Silver Coating, Electroplating Time, Coating Thickness, Microhardness

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/968018>

