عنوان مقاله:

Effect of Sliding Speed on Wear Behavior of Ni/Nano SiC Composite Coatings

محل انتشار:

دهمین همایش مشترک و پنجمین کنفرانس بین المللی انجمن مهندسی مواد و متالورژی و انجمن علمی ریخته گری ایران (سال: 1395)

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خلاصه مقاله:

Nickel/Nano SiC composite coatings were electrodeposited in a modified watt's bath containing Nano-β-SiC particles and sodium saccharin by direct current (DC) plating. In this study, the influence of sliding speed on wear rate, friction coefficient and wear mechanism of composite nickel coatings were investigated. Scanning electron microscopy (SEM) was used to study the surface morphology of the coatings and investigation of wear mechanism. In addition the energy dispersive spectroscopy (EDS) analysis was used to study the co-deposition of coatings and wear mechanism. The results revealed that by increasing sliding speed, wear rate increased severely while the friction coefficient in increased slightly. Furthermore increasing sliding speed of wear test didn't change the mechanism of wear from abrasive but causes to formation of oxide layer on edge of wear track.

کلمات کلیدی:

Wear, Electroplating, Sliding Speed, Ni-SiC Composite Coatings, Nano SiC,Sodium Saccharin