

## عنوان مقاله:

Surface melting of Al-based metal matrix coating with presence of B4C particles by Gas Tungsten Arc welding ((GTAW

## محل انتشار:

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

تعداد صفحات اصل مقاله: 8

## نویسندگان:

Amirhosein Zabih - MSc Student & Corrosion and Protection of Materials

Reza Soltani - Assistant Professor & Surface Engineering University of Tehran, School of Metallurgy and Materials Engineering

Ali Alizadeh - Assistant Professor & Composite University of Tehran, School of Metallurgy and Materials Engineering

## خلاصه مقاله:

A coating made of composite material consisting of an Al-Mg matrix reinforced with B4C particles was produced using thermal spray process onto Al-Mg substrate. After Al/B4C powder was coated on Al alloy surface, the coating was melted using Gas Tungsten Arc welding (GTAW). The microstructure, the microhardness and the corrosion resistance of the present coating were analyzed. GTAW helps the coating achieve a bonding with substrate. The microstructure was characterized by optical microscopy and scanning electron microscope (SEM) of the surface composite layers. This process on the coating caused an improvement on microhardness and corrosion behavior of the samples. In this research, Potentiodynamic polarization technique was utilized to study the corrosion behavior of samples in 3.5 wt. % NaCl solution

## کلمات کلیدی:

Al-Mg, B4C, Gas Tungsten Arc Welding, Microhardness, Corrosion resistance

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/574673>

