

عنوان مقاله:

Plasma Spray Spinel-MgO Composite Coatings on Steel Substrate

محل انتشار:

دومین کنفرانس بین المللی کامپوزیت (سال: 1389)

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خلاصه مقاله:

Spinel is a suitable compound for use in corrosive and wear environments. These compounds usually are used in refractories. Doping spinel (Al_2O_3 -MgO) by magnesium oxide (MgO) can generate better properties and expand their applications. In this study, Spinel-MgO composite coatings are investigated. These composite coatings on steel substrates have been obtained by plasma spray process and then have been characterized and tested. The crystallographic phases of these deposits were characterized using X-ray diffraction (XRD) and microstructures were investigated by optical microscopy and scanning electron microscopy (SEM). Adhesion tests have been done by the pulling method. The results show that these coatings have appropriate properties for use as a protective coating on steel substrates.

کلمات کلیدی:

Spinel, Atmospheric Plasma Spray, APS, MgO, Coating

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