عنوان مقاله:

In Situ Fabrication of Multi Layers Al-Al2O3Functionally Graded Composite via Hot Press Method

محل انتشار:

چهارمین کنفرانس بین المللی کامپوزیت (سال: 1393)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

In this study fabrication of three - and five - layer Al-Al2O3 graded composite (FGCs) including 5.7-18.7 vol% and 5.7-15.4 vol% of Al2O3 phase, respectively via ball milling of Al and ZnO powder and thereafter hot pressing at 5800C was investigated. The synthesis of alumina particulates was accomplished via aluminothermic reaction in Al - matrix. The occurrence of aluminothermic reaction was investigated by XRD analysis. OM and SEM studies were performed to observe porosity, the interfaces between layers, and the alumina particulates. The results showed that five - layer Al-Al2O3 FGCs have better gradient in hardness. In addition, maximum hardness and relative density were measured .as 137.4 Hv and 99.5%, respectively

کلمات کلیدی:

FGCs, Al-Al2O3, Aluminothermic Reaction

لینک ثابت مقاله در پایگاه سیویلیکا: