

## عنوان مقاله:

Effect of Rolling Process on Mg/SiC Magnesium Matrix Composites

## محل انتشار:

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## خلاصه مقاله:

In this paper, Mg composite containing SiC reinforcement particle has been fabricated using powder metallurgy (PM) process followed by hot rolling. First, 5 and 10 wt. % SiC powder (with average size of  $15\mu\text{m}$ ) has been added to Mg powder. Then they have been mixed by using high energy planetary ball-milling under argon atmosphere. In order to fabricate Mg/SiC composite, the mixture has been cold-compacted, sintered and finally hot-rolled in different temperatures and different number of passes. Microstructure and micro-hardness of the samples are investigated by optical microscopy and micro-Vickers hardness test, respectively. Microscopic evaluation of the hot-rolled composites shows a uniform distribution of SiC particles. No significant grain refinement is observed in the composite in comparison to monolithic Mg sample, while the hardness of samples has been increased by enhancing the number of rolling passes and SiC weight fraction.

## کلمات کلیدی:

Magnesium Matrix Composite, Mg/SiC, Powder Metallurgy, Rolling

## لینک ثابت مقاله در پایگاه سیویلیکا:

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