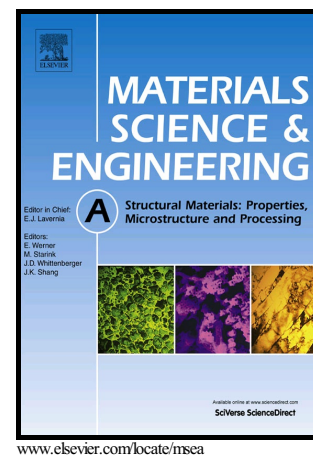


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Development of stainless steel particulate reinforced AA6082 aluminum matrix composites with enhanced ductility using friction stir processing

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Abstract

Aluminum matrix composites (AMCs) reinforced with various ceramic particles usually exhibit poor ductility. One solution to increase ductility is the usage of hard metallic or alloy particles as reinforcements. An attempt was made to reinforce stainless steel (SS) particles to prepare AA6082/ (0,6,12 and 18 vol. %) SS AMCs via friction stir processing (FSP). SS particles were effectively embedded in the aluminum matrix in its alloy form without any detrimental interfacial reaction. The distribution of SS particles in the composite

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