

عنوان مقاله:

Effects of SiC Particle Content and Stirring Temperature on the tensile properties of Al-SiCp composites fabricated by semisolid stirring route

محل انتشار:

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خلاصه مقاله:

In the present study, the semisolid stirring technique was used to fabricate Al-A356/SiCp composite samples. A356-SiCp samples reinforced with various 20 μm -sized SiC particle contents (5, 10 and 15 vol.%) were produced. Semisolid stirring was carried out at temperatures of 590, 600 and 610°C with stirring speed of 400 rpm for 30 min. The effects of SiC particle content and stirring temperature on the tensile properties of produced composite samples were investigated. The results obtained in this work showed enhancement in the tensile properties of the A356-SiCp composite samples by decreasing the stirring temperature, supported by evidence of improved particle distribution and decreased porosity content. From the tensile tests, an increase in SiC particle content increased strength and decreased ductility

کلمات کلیدی:

A356-SiCp composite, Semisolid stirring, Porosity, Reinforcement distribution, Tensile properties

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