

Al BASED COMPOSITES REINFORCED WITH CERAMIC NANOPARTICLE CONSOLIDATED BY PM METHOD

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ABSTRACT

In the present paper, the nanometric Al₂O₃ particulate-reinforced aluminium composites were fabricated by Powder Metallurgy (PM) technique. The aim of this work is to investigate the effect of volume fraction of Al₂O₃ (2, 4 and 6%) nanoparticles and the effect of the milling time (2, 4 and 6 hrs) on the physical microstructure and mechanical properties of the Al-Al₂O₃ composites, with and without mechanical milling processing of the powders.

KEY WORDS: Aluminium composites, ceramic nanoparticles, Al₂O₃, metal matrix composites, powder metallurgy.

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