



Simulation of production process and mechanical behaviour of Mg-SiC nanocomposites

Cold isostatic pressing is a practical and effective process for producing bulk materials from metal powders. This project focus on the numerical simulation of cold isostatic pressing of mechanically milled magnesium powders reinforced with SiC nanoparticles.

The drucker-prager-cap model implemented in ABAQUS is used to predict the compaction behaviour of the nanocomposites. The effect of SiC nanoparticle content on the density distribution and compressibility of the milled powders is investigated after cold isostatic pressing.

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Forschungsthemen

Finite Elementmethode (FEM)

Materialien

Magnesium
Mg-SiC Nanokomposite