

عنوان مقاله:

Influence of Temperature and Pressure on Mechanical Properties of CNTs-Reinforced Aluminum Nano-composites
Fabricated by Double-Pressing Double-Sintering Method

محل انتشار:

چهارمین کنفرانس بین المللی آلومینیوم ایران ۱۶۲۰۱۶ IIAAC (سال: ۱۳۹۵)

تعداد صفحات اصل مقاله: 6

نویسندگان:

A Yarahmadi - MSc. Student of Metallurgy and Materials Engineering Department, Engineering and Technology
faculty, Imam Khomeini International University (IKIU), Qazvin, Iran

M Rajabi - Academic Member at Metallurgy and Materials Engineering Department, Engineering and Technology
.Faculty, Imam Khomeini International University (IKIU), Qazvin, Iran

M.T Noghani - Academic Member at Metallurgy and Materials Engineering Department, Engineering and Technology
.Faculty, Imam Khomeini International University (IKIU), Qazvin, Iran

R Taghiabadi - Academic Member at Metallurgy and Materials Engineering Department, Engineering and Technology
Faculty, Imam Khomeini International University (IKIU), Qazvin, Iran

خلاصه مقاله:

Multi-walled carbon nanotubes (MWCNTs) should be attractive for the reinforcement of metal-matrix composites, because of their high strength, high modulus and high thermal conductivity. The effects of CNTs content, temperature, pressure and secondary pressing-sintering on mechanical properties of the nano-composites were investigated. To improve density as well as mechanical properties, the double-pressing double-sintering technique was used, as increments of 2.4 to 16.14% of densification was obtained when compared with the nano-composites produced by conventional sintering route. In this study, the optimum CNTs content, temperature and pressure have been determined for the manufacture of Al-CNTs nano-composites. SEM and XRD have been used to study morphology, sintering procedure and various phases produced during synthesis of the Al-CNTs nano-composites

کلمات کلیدی:

Aluminum-CNTs Nano-composites; optimum density; influence of temperature and pressure; double-pressing double-sintering method; mechanical properties

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/690190>

