

Composite Materials NiTi-Ti₂Ni

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NiTi is a shape memory alloy used mainly in medicine. Many applications can be also found in industrial sector. Its properties are considerably determined by structure and phase composition. It was found that production by powder metallurgy method leads to creation of required phase NiTi, but certain amount of hard and brittle phase Ti₂Ni is also formed. Its presence in the structure affects mechanical properties of the alloy and it might widen the applicability of material to a new industrial branches. Suitable preparation method of composite material NiTi-Ti₂Ni with the possibility to control amount of generated phase Ti₂Ni would allow regulation of material mechanical properties.

Keywords: nitinol; powder metallurgy; composite

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