Title (en)

PROCESS OF MAKING TITANIUM ALLOY ARTICLES BY POWDER METALLURGY

Publication

EP 0024984 B1 19841219 (FR)

Application

EP 80401206 A 19800822

Priority

FR 7921441 A 19790827

Abstract (en)

[origin: US4381942A] The invention relates to a process for the production of titanium-based alloy members by powder metallurgy. This process consists of: (a) preparing a titanium or titanium alloy powder having a grain size distribution between 100 and 1000 mu m, (b) depositing on said powder a coating of a material such that on contact with the titanium or titanium alloy it forms a liquid phase at a temperature T1 which is below the allotropic transformation temperature T of the titanium or titanium alloy constituting the said powder, (c) introducing the thus coated powder into a mould, and (d) hot compressing this powder in the mould at a pressure of 10 to 30 MPa at a temperature between T1 and T for a time such that a complete densification of the powder is obtained. Application to the construction of discs for turbines with integrated blades.

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