

Title (en)

POWDER-METALLURGICAL MANUFACTURE OF WORK PIECES FROM A HEAT-RESISTING ALUMINIUM ALLOY

Publication

EP 0256449 B1 19900516 (DE)

Application

EP 87111462 A 19870807

Priority

CH 323286 A 19860812

Abstract (en)

[origin: US4737339A] A workpiece consisting of a heat-resistant aluminum alloy is produced by a powder-metallurgical process wherein an alloy containing 8 to 14% by weight Fe, 0.5 to 2% by weight V and 0.2 to 1% by weight Mn is melted, the melt is cooled in a gas stream at a rate of at least 105 DEG C/s and is atomized to form particles having a diameter of 1 to 40 μ m, whereupon the powder is consolidated at a temperature of 350 DEG to 450 DEG C. at a pressure of 2000 to 6000 bar, to form a pressed article. In this process, the intermetallic compound Al₆Fe stabilized by Mn occurs in fine distribution. This dispersoid imparts high ductility and toughness to the grain.

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B22F 9/08; C22C 1/04

IPC 8 full level

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