

Title (en)

PROCESS FOR THE PREPARATION BY SPRAY DEPOSITS OF ALUMINIUM ALLOYS OF THE 7000 SERIES, AND DISCONTINUOUSLY REINFORCED COMPOSITE MATERIALS HAVING THESE HIGH STRENGTH, HIGHLY DUCTILE ALLOYS AS A MATRIX

Publication

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Application

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Priority

FR 8817044 A 19881219

Abstract (en)

[origin: EP0375571A1] The invention relates to a process for obtaining an Al alloy of the 7000 series (Al-Zn-Cu-Mg) of high mechanical strength and good ductility by spray deposition; the process is aimed at obtaining Al alloys having a breaking load of ≥ 800 MPa and an elongation greater than or equal to 5%, or obtaining these same alloys reinforced with ceramic particles. <??>The invention accordingly consists in: 1. forming, by spray deposition, a massive alloy of the following composition by weight: Zn from 8.5 to 15%; Mg from 2.0 to 4.0%; Cu from 0.5 to 2.0%; at least one of the following 3 elements: Zr from 0.05 to 0.8%; Mn from 0.05 to 1.0%; Cr from 0.05 to 0.8%, with Zr + Mn + Cr $\leq 1.4\%$; Fe up to 0.5%; Si up to 0.5%; other elements $\leq 0.05\%$ each, $\leq 0.15\%$ in total; remainder Al. 2. hot transforming of the body thus obtained at between 300 and 450 DEG C and optionally in the cold and 3. treating the product thus obtained by dissolution, quenching and annealing.

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C22C 1/04; C22C 21/10; C22F 1/053

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Cited by

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