

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

**EP 89420497 A 19891218**

Priority

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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  $\geq 800$  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.

IPC 1-7

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IPC 8 full level

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