Title (en)

LIGHT METAL ALLOY SINTERING METHOD

Title (de)

VERFAHREN ZUM LEICHTMETALL-LEGIERUNGS-SINTERN

Title (fr)

PROCEDE DE FRITTAGE D'UN ALLIAGE LEGER

Publication

EP 1709209 B1 20080611 (DE)

Application

EP 04802845 A 20041126

Priority

- DE 2004002636 W 20041126
- DE 102004002714 A 20040119

Abstract (en)

[origin: DE102004002714B3] To sinter a light metal alloy, the alloy powder is pressed into a green compact at 90% of its theoretical density. The green compact is sintered at a temperature of 80-95% of the limiting crystallization temperature of the light metal alloy, as the press is removed. The pre-sintered material is given a two-dimensional cold pressing by 10% of its height with a longitudinal distortion of the granules. The material is sintered again at a higher temperature of 90-99% of the limiting crystallizing temperature, with a final calibration and further compression by 1-2% of its height. The metallurgical powder can also incorporate hard materials e.g. SiC, boron carbide, boron nitride, tungsten carbide, and the like.

IPC 8 full level

C22C 1/04 (2006.01); **B22F 3/16** (2006.01)

CPC (source: EP)

B22F 3/16 (2013.01); **C22C 1/0416** (2013.01); **C22C 21/02** (2013.01); **C22C 21/12** (2013.01); B22F 2003/248 (2013.01); B22F 2998/00 (2013.01)

Citation (examination)

JP 2000017307 A 20000118 - TOYOTA MOTOR CORP

Cited by

CN102699327A; CN108277369A; CN103506624A; DE102017123738A1

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