

Title (en)
METHOD OF PRODUCING HARD MAGNETIC PARTS

Title (de)
VERFAHREN ZUR HERSTELLUNG HARTMAGNETISCHER TEILE

Title (fr)
PROCEDE DE FABRICATION DE PARTIES MAGNETIQUES DURES

Publication
EP 0775363 A1 19970528 (DE)

Application
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Priority

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Abstract (en)
[origin: US5733384A] PCT No. PCT/EP96/02379 Sec. 371 Date Feb. 11, 1997 Sec. 102(e) Date Feb. 11, 1997 PCT Filed Jun. 1, 1996 PCT Pub. No. WO97/00524 PCT Pub. Date Jan. 3, 1997A process is provided for a technologically controllable, economic production of hard-magnetic parts from Sm₂-(Fe,M)₁₇-Cy-base work materials with interstitial inclusions, where M designates gallium and/or at least one metallic element serving to stabilize a rhombohedral 2:17 structure. A Sm₂Fe₁₇-xM_xCy powder mixture is produced, where x>0.1 and 3>=y>=0. The mixture is subjected to an intensive fine grinding process in a ball mill. The finely ground mixture is heat-treated in a temperature range from 650 DEG C. to 900 DEG C. for partial or complete recrystallization. The resulting ultra-fine-grain Sm₂Fe₁₇-xM_xCy magnetic powder is compacted to produce magnet bodies by a hot pressing processing in a temperature range from 650 DEG C. to 900 DEG C. The process is applicable, for example, for the production of hard-magnetic parts based on interstitial Sm₂Fe₁₇Cy compounds.

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