

Title (en)

R-Fe-B type magnet powder, sintered magnets therefrom and preparation process

Title (de)

Magnetpulver vom Typ SE-Fe-B, Sintermagnete daraus und Herstellungsverfahren

Title (fr)

Poudre magnétique de type Fe-TR-B et aimants frittés correspondants et leur méthode de préparation

Publication

EP 0601943 B1 19980520 (FR)

Application

EP 93420483 A 19931207

Priority

- FR 9214995 A 19921208
- FR 9308586 A 19930707

Abstract (en)

[origin: EP0601943A1] The magnetic powder employed for the manufacture of sintered magnets of the RE-T-B class, where RE denotes at least one rare earth, T at least one transition element and B boron, consists of the mixture of 2 powders (A) and (B): a) the powder (A) consisting of grains of RE₂T₁₄B tetrahedral structure, T being essentially iron with Co/Fe < 8 % being also capable of containing up to 0.5 % Al, up to 0.05 % Cu and up to 4 % in all of at least one element from the group consisting of V, Nb, Hf, Mo, Cr, Ti, Zr, Ta, W and of the unavoidable impurities, with a Fisher particle size of between 3.5 and 5 μ m; b) the powder (B) being rich in RE and containing Co, having the following composition by weight: RE 52-70 %, including at least 40 % (in absolute value) of one (or more) light rare earth(s) chosen from the group consisting of La, Ce, Pr, Nd, Sm and Eu; Co 20-35 %; Fe 0-20 %; B 0-0.2 %; Al 0.1-4 %; and unavoidable impurities, with a Fisher particle size of between 2.5 and 3.5 μ m. The powder (B) may be obtained by mixing a RE-rich powder (C) containing Co with a B-rich powder (D). <IMAGE>

IPC 1-7

H01F 1/057; **H01F 1/08**

IPC 8 full level

C22C 33/02 (2006.01); **C22C 1/04** (2006.01); **C22C 38/00** (2006.01); **H01F 1/053** (2006.01); **H01F 1/057** (2006.01); **H01F 1/06** (2006.01); **H01F 1/08** (2006.01)

IPC 8 main group level

B22F 3/00 (2006.01); **C01F 1/00** (2006.01); **C04B 35/00** (2006.01); **H01F 41/00** (2006.01)

CPC (source: EP US)

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Citation (examination)

EP 0447567 A1 19910925 - KAWASAKI STEEL CO [JP]

Cited by

US5985050A; DE19541948A1; EP0789367A1; EP0651401A1; US5595608A; CN111180158A

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