

Title (en)

HIGH ENERGY PRODUCT RARE EARTH-TRANSITION METAL MAGNET ALLOYS CONTAINING BORON

Publication

EP 0144112 B1 19890927 (EN)

Application

EP 84300741 A 19840207

Priority

US 54472883 A 19831026

Abstract (en)

[origin: EP0144112A1] Magnetically hard compositions having high values of coercivity, remanence and energy product contain rare earth elements, transition metal elements and boron in suitable proportions. The preferred rare earth elements are neodymium and praseodymium, and the preferred transition metal element is iron. The magnetic alloys have characteristic very finely crystalline microstructures, in which there is present a tetragonal crystal phase with an atomic formula of RE₂TM₁₄B₁, in which: RE represents one or more rare earth elements, with neodymium and or praseodymium comprising at least 60 atomic percent thereof; and TM represents one or more transition metal elements, with iron comprising at least 60 atomic percent thereof.

IPC 1-7

C22C 38/00; **H01F 1/04**

IPC 8 full level

C22C 38/00 (2006.01); **H01F 1/057** (2006.01)

CPC (source: EP)

C22C 38/00 (2013.01); **H01F 1/057** (2013.01)

Citation (examination)

- EP 0101552 A2 19840229 - SUMITOMO SPEC METALS [JP]
- EP 0106948 A2 19840502 - SUMITOMO SPEC METALS [JP]

Cited by

US5213631A; DE3709138A1; DE3832472A1; US4844751A; EP0260746A1; CN103668007A; DE3626406A1; EP0229946A1; GB2308384A; GB2308384B; EP0302947A4; US6136099A; EP0231620A3; US4921551A; US5538565A; US5560784A; US5597425A; US5565043A; EP0284832A1; US4854979A; EP0261292A3; US10861629B1

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