

Title (en)

Magnetic materials containing rare earth element iron nitrogen and hydrogen.

Title (de)

Magnetische Stoffe, enthaltend Seltenerdelemente, Eisen, Stickstoff und Wasserstoff.

Title (fr)

Matériaux magnétiques contenant des éléments en terres rares, du fer, du nitrogène et de l'hydrogène.

Publication

**EP 0369097 B1 19940615 (EN)**

Application

**EP 89104753 A 19890316**

Priority

JP 28574188 A 19881114

Abstract (en)

[origin: EP0369097A1] Magnetic materials represented by the formula  $R\alpha Fe(100-\alpha-\beta-\gamma)N\beta H\gamma(I)$  or  $R\alpha Fe(100-\alpha-\beta-\gamma-\delta)N\beta H\gamma M\delta(II)$  wherein R is at least one rare earth element inclusive of Y, M is at least one additive selected from the group consisting of Sn, Ga, In, Bi, Pb, Zn, Al, Zr, Cu, Mo, Ti, Si, MgO, Al<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, AlF<sub>3</sub>, ZnF<sub>2</sub>, SiC, TiC, AlN and Si<sub>3</sub>N<sub>2</sub>,  $\alpha$  is 5 to 20 atomic percent,  $\beta$  is 5 to 30 atomic percent,  $\gamma$  is 0.01 to 10 atomic percent and  $\delta$  is 0.1 to 40 atomic percent, sintered magnets and bonded magnets obtained from the magnetic materials.

IPC 1-7

**C22C 38/00**; H01F 1/04; H01F 1/047; H01F 1/053; H01F 1/08

IPC 8 full level

**C22C 1/04** (2006.01); **H01F 1/055** (2006.01); **H01F 1/059** (2006.01)

CPC (source: EP)

**C22C 1/0441** (2013.01); **H01F 1/0553** (2013.01); **H01F 1/059** (2013.01)

Citation (examination)

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- JP H05848607 A
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- CHEMICAL ABSTRACTS, vol. 103, no. 26, December 30, 1985, Columbus, Ohio, USA HITACHI METALS, LTD. "Permanent magnets from iron alloys with rare earth metals and nitrogen" page 243, abstract-no. 219 192t; & JP-A-60 131 949
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