

Title (en)

Fe-based soft magnetic alloy and dust core made therefrom.

Title (de)

Weichmagnetische Legierung auf Eisenbasis und daraus hergestellter Pulverkern.

Title (fr)

Alliage magnétique mou à base de fer et noyau en poudre fait à partir de celui-ci.

Publication

**EP 0342922 B1 19950208 (EN)**

Application

**EP 89304926 A 19890516**

Priority

- JP 11833588 A 19880517
- JP 30068688 A 19881130

Abstract (en)

[origin: EP0342922A2] Fe-based soft magnetic alloy having improved soft magnetic characteristics with high saturated magnetic flux density, characterized in having fine crystal grains and defined by formula (I)  $\text{Fe}_{100-a-b-c}\text{Cu}_a\text{M}_b\text{Y}_c$  (I) wherein "M" is at least one element from: groups IVa, Va, VIa of the periodic table, Mn, Co, Ni, Al, and the Platinum group, "Y" is at least one of: Si, B, P, and C, and wherein a, b and c, in atomic % are defined thus:  $3 < a \leq 8$ ,  $0.1 < b \leq 8$ ,  $3.1 \leq a+b \leq 12$ ,  $15 \leq c \leq 28$ . A dust core made from an alloy powder having fine crystal grains is defined by formula (II)  $\text{Fe}_{100-a-b-c-d-e}\text{Cu}_a\text{M}_{\text{min}}\text{bM}_{\text{sec}}\text{cSi}_d\text{Be}_e$  (II) wherein "M min" is at least one element from: Groups IVa, Va, VIa of the periodic table; "M sec" is at least one element from: Mn, Co, Ni, Al, and the Platinum group; and wherein a, b, c, d and e, in atomic %, are defined thus  $3 < a \leq 8$ ,  $0.1 < b \leq 8$ ,  $0 \leq c \leq 15$ ,  $8 \leq d \leq 22$ ,  $3 \leq e \leq 15$ ,  $15 \leq d+e \leq 28$ .

IPC 1-7

**H01F 1/14**; **C22C 38/16**; **C21D 6/00**

IPC 8 full level

**C22C 45/02** (2006.01); **H01F 1/153** (2006.01)

CPC (source: EP KR)

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Cited by

US5628840A; US6093261A; US5622768A; US5804282A; EP1850334A1; US6187112B1; WO9632518A1

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