

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

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- 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 $3 < a \leq 8$, $0.1 < b \leq 8$, $0 \leq c \leq 15$, $8 \leq d \leq 22$, $3 \leq e \leq 15$, $15 \leq d+e \leq 28$.

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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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