

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 A2 19891123 (EN)**

Application

**EP 89304926 A 19890516**

Priority

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- JP 30068688 A 19881130

Abstract (en)

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:  $3 < a \leq 8.0$ ,  $1 \leq b \leq 8.3$ ,  $1 \leq a+b \leq 12.5$ ,  $c \leq 28$ . 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  $3 < a \leq 8.0$ ,  $1 \leq b \leq 8.0$ ,  $0 \leq c \leq 15.8$ ,  $0 \leq d \leq 2.2$ ,  $3 \leq e \leq 15.1$ ,  $d+e \leq 28$ .

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IPC 8 full level

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CPC (source: EP KR)

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Cited by

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

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