

Title (en)

Fe-base soft magnetic alloy and process for making same

Title (de)

Weichmagnetische Legierung auf Eisenbasis und Herstellungsverfahren

Title (fr)

Alliage magnétiquement doux à base de fer et procédé de fabrication

Publication

**EP 0575190 B1 19970917 (EN)**

Application

**EP 93304762 A 19930617**

Priority

JP 15833892 A 19920617

Abstract (en)

[origin: EP0575190A2] A Fe-base soft magnetic alloy of formula  $\text{Fe}_{100-a-b-c-d}\text{PaMbM}'\text{cCu}_d$  where M is at least one element selected from Zr, Hf, Nb, Mo, W, Ta, Ti, V, Cr, Mn, Y and Ce; M' is at least one element selected from Si, Al, Ga, Ge, Ru, Co, Ni, Sn, Sb and Pd; a, b, c and d each are an atomic % and satisfy the relations:  $0 < a \leq 25$ ,  $0 < b \leq 15$ ,  $0 \leq c \leq 20$ , and  $0 \leq d \leq 5$  having excellent soft magnetic properties, especially low magnetostriction and low iron loss is made by adding a determined amount of a specific element M, a determined amount of Cu is further added to the alloy and the quenched alloy composition is shaped and heat-treated to provide the Fe-base soft magnetic alloy.

IPC 1-7

**H01F 1/153**; **H01F 3/00**

IPC 8 full level

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CPC (source: EP KR)

**C22C 45/02** (2013.01 - EP); **H01F 1/04** (2013.01 - KR); **H01F 1/15308** (2013.01 - EP)

Cited by

CN111640550A; CN117026103A; DE44444482A1; CN102360670A; US11349113B2; WO2022059966A1

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