

Title (en)

Heating process with magnetic field of a soft magnetic component

Title (de)

Magnetfeld-Heizungsprozess eines weichmagnetisches Komponent

Title (fr)

Procédé de traitement thermique sous champ magnétique d'un composant en matériau magnétique doux

Publication

EP 0883141 A1 19981209 (FR)

Application

EP 98401043 A 19980429

Priority

FR 9706849 A 19970604

Abstract (en)

A magnetisable material such as an iron-nickel-molybdenum 15-80-5 alloy, an amorphous cobalt-based alloy or an iron-silicon-copper-niobium-boron nanocrystalline alloy is heated below the Curie point. It is subjected to a magnetic field whose intensity is varied over time, following a series of peaks. The intensity is progressively increased to a maximum and thereafter decreased to a minimum. The field may be longitudinal, transverse, unidirectional, continuous or alternating.

IPC 1-7

H01F 1/14; **H01F 1/147**; **H01F 1/153**

IPC 8 full level

C21D 1/04 (2006.01); **C21D 10/00** (2006.01); **C22F 1/10** (2006.01); **C21D 6/00** (2006.01); **H01F 1/14** (2006.01); **H01F 1/147** (2006.01); **H01F 1/153** (2006.01)

CPC (source: EP US)

C21D 1/04 (2013.01 - EP US); **H01F 1/14** (2013.01 - EP US); **H01F 1/14708** (2013.01 - EP US); **H01F 1/15333** (2013.01 - EP US); **H01F 1/15341** (2013.01 - EP US)

Citation (search report)

- [A] US 4950337 A 19900821 - LI JAMES C [US], et al
- [A] DE 2816173 A1 19791018 - VACUUMSCHMELZE GMBH
- [A] YOSHIZAWA Y ET AL: "EFFECTS OF MAGNETIC FIELD ANNEALING ON MAGNETIC PROPERTIES IN ULTRAFINE CRYSTALLINE FE-CU-NB-SI-B ALLOYS", IEEE TRANSACTIONS ON MAGNETICS, vol. 25, no. 5, 1 September 1989 (1989-09-01), pages 3324 - 3326, XP000069103
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 063 (C - 568) 13 February 1989 (1989-02-13)
- [A] PATENT ABSTRACTS OF JAPAN vol. 012, no. 213 (C - 505) 17 June 1988 (1988-06-17)

Cited by

WO2010081993A1; CN102031349A; CN115094210A; EP2209127A1; US8699190B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0883141 A1 19981209; **EP 0883141 B1 20030528**; AT E241849 T1 20030615; AU 6483698 A 19981210; AU 733279 B2 20010510; CN 1112711 C 20030625; CN 1201991 A 19981216; CZ 165998 A3 19990113; DE 69814983 D1 20030703; DE 69814983 T2 20040513; ES 2196510 T3 20031216; FR 2764430 A1 19981211; FR 2764430 B1 19990723; HU 9801275 D0 19980728; HU P9801275 A2 20001228; HU P9801275 A3 20021228; JP H118110 A 19990112; KR 19990006483 A 19990125; PL 184069 B1 20020830; PL 326622 A1 19981207; RO 119574 B1 20041230; RU 2190023 C2 20020927; SK 67798 A3 19990111; TR 199801001 A2 19991021; TR 199801001 A3 19991021; TW 367508 B 19990821; US 5935346 A 19990810; ZA 984148 B 19981126

DOCDB simple family (application)

EP 98401043 A 19980429; AT 98401043 T 19980429; AU 6483698 A 19980512; CN 98109635 A 19980603; CZ 165998 A 19980528; DE 69814983 T 19980429; ES 98401043 T 19980429; FR 9706849 A 19970604; HU P9801275 A 19980603; JP 15457598 A 19980603; KR 19980018559 A 19980522; PL 32662298 A 19980602; RO 9801046 A 19980603; RU 98110456 A 19980603; SK 67798 A 19980521; TR 9801001 A 19980603; TW 87107287 A 19980512; US 8194098 A 19980521; ZA 984148 A 19980518