

Title (en)

PROCESS AND SYSTEM FOR PRODUCING GRANULATION POWDER OF RARE EARTH ALLOY AND PROCESS FOR PRODUCING SINTERED OBJECT OF RARE EARTH ALLOY

Title (de)

VERFAHREN UND SYSTEM ZUR HERSTELLUNG VON GRANULIERPULVER EINER SELTENERDENLEGIERUNG UND VERFAHREN ZUR HERSTELLUNG EINES GESINTERTEN OBJEKTS AUS EINER SELTENERDENLEGIERUNG

Title (fr)

PROCEDE ET SYSTEME PERMETTANT DE PRODUIRE UNE POUDRE GRANULAIRE D'ALLIAGE A BASE DE TERRES RARES ET PROCEDE DE PRODUCTION D'UN OBJET FRITTE A BASE DUDIT ALLIAGE DE TERRES RARES

Publication

**EP 1642661 A4 20071010 (EN)**

Application

**EP 04734936 A 20040526**

Priority

- JP 2004007586 W 20040526
- JP 2003148567 A 20030527

Abstract (en)

[origin: EP1642661A1] A method for making a granulated powder according to the present invention includes the steps of: preparing a rare-earth alloy powder with remanent magnetization; feeding the powder onto a track 22, which is defined by a side surface 22a and a lower surface 22b that is sloped so as to decrease its height toward the side surface; and setting up vibrations on the track to give the powder kinetic energy, thereby transporting the powder along the length of the track and granulating the powder under a substantially zero magnetic field by utilizing an agglomeration force produced by the remanent magnetization of the powder and a tumbling action produced by the kinetic energy. As a result, a rare-earth alloy granulated powder, which has good flowability and good compactibility and which makes it possible to produce a magnet with excellent magnetic properties, can be obtained.

IPC 8 full level

**B22F 3/02** (2006.01); **B22F 1/00** (2006.01); **B22F 9/04** (2006.01); **H01F 1/053** (2006.01); **H01F 1/06** (2006.01); **H01F 41/02** (2006.01); **H01F 1/057** (2006.01)

CPC (source: EP)

**B22F 9/04** (2013.01); **C22C 1/11** (2023.01); **H01F 41/0273** (2013.01); **B22F 2009/045** (2013.01); **B22F 2998/00** (2013.01); **C22C 2202/02** (2013.01); **H01F 1/0577** (2013.01)

Citation (search report)

- [X] US 5116434 A 19920526 - KEEM JOHN [US], et al
- [X] JP H06262055 A 19940920 - DAIWA KASEI KOGYO KK
- [A] US 5733384 A 19980331 - CAO LEI [DE], et al
- [A] WO 02054418 A1 20020711 - MAGNEQUENCH INC [US]
- [AP] JP 2003166001 A 20030613 - SUMITOMO SPEC METALS
- [AP] JP 2004131815 A 20040430 - SUMITOMO SPEC METALS & US 2005006005 A1 20050113 - KUNIYOSHI FUTOSHI [JP], et al
- See references of WO 2004105982A1

Designated contracting state (EPC)

DE

DOCDB simple family (publication)

**EP 1642661 A1 20060405**; **EP 1642661 A4 20071010**; **EP 1642661 B1 20090715**; CN 101811191 A 20100825; CN 101811191 B 20110921; CN 1717290 A 20060104; CN 1717290 B 20100811; DE 602004022051 D1 20090827; JP 4910393 B2 20120404; JP WO2004105982 A1 20060720; WO 2004105982 A1 20041209

DOCDB simple family (application)

**EP 04734936 A 20040526**; CN 200480001455 A 20040526; CN 201010175502 A 20040526; DE 602004022051 T 20040526; JP 2004007586 W 20040526; JP 2005506541 A 20040526