

Title (en)

IRON-COBALT ALLOY, IN PARTICULAR FOR ELECTROMAGNETIC ACTUATOR MOBILE CORE AND METHOD FOR MAKING SAME

Title (de)

EISEN-KOBALT-LEGIERUNG INSBESONDERE FÜR ELEKTROMAGNETISCHEN AKTUATOR MIT BEWEGLICHEM KERNTIL UND HERSTELLUNGSVERFAHREN

Title (fr)

ALLIAGE FER-COBALT, NOTAMMENT POUR NOYAU MOBILE D'ACTIONNEUR ELECTROMAGNETIQUE ET SON PROCEDE DE FABRICATION

Publication

EP 1281182 B1 20100421 (FR)

Application

EP 01934103 A 20010511

Priority

- FR 0101440 W 20010511
- FR 0006088 A 20000512

Abstract (en)

[origin: WO0186665A1] The invention concerns an iron-cobalt alloy, characterised in that it comprises in weight percentages: 10 to 22 % of Co; traces to 2.5 % of Si; traces to 2 % of Al; 0.1 to 1 % of Mn; traces to 0.0100 % of C; a total of O, N and S content ranging between traces and 0.0070 %; a total of Si, Al, Cr, Mo, V, Mn content ranging between 1.1 and 3.5 %; a total of Cr, Mo and V content ranging between traces and 3 %; a total of Ta and Nb content ranging between traces and 1 %; the rest being iron and impurities resulting from production; and in that: $1.23 \times (\text{Al} + \text{Mo}) \% + 0.84 (\text{Si} + \text{Cr} + \text{V}) \% - 0.15 \times (\text{Co} \% - 15) \leq 2.1$ and in that $14.5 \times (\text{Al} + \text{Cr}) \% + 12 \times (\text{V} + \text{Mo}) \% + 25 \times \text{Si} \% \geq 21$. The inventive alloy is useful for making electromagnetic actuator mobile cores.

IPC 8 full level

H01F 1/147 (2006.01); **C21D 8/00** (2006.01); **C21D 8/12** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/10** (2006.01); **C22C 38/12** (2006.01); **C22C 38/18** (2006.01); **C22C 38/30** (2006.01); **H01F 7/16** (2006.01); **H01F 41/02** (2006.01)

CPC (source: EP KR US)

C21D 8/005 (2013.01 - EP US); **C22C 38/004** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/10** (2013.01 - EP KR US); **C22C 38/12** (2013.01 - EP US); **C22C 38/18** (2013.01 - EP US); **H01F 1/147** (2013.01 - EP US)

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 0186665 A1 20011115; AT E465500 T1 20100515; AU 6041201 A 20011120; DE 60141900 D1 20100602; EP 1281182 A1 20030205; EP 1281182 B1 20100421; ES 2342766 T3 20100714; FR 2808806 A1 20011116; FR 2808806 B1 20020830; JP 2004515644 A 20040527; JP 5027372 B2 20120919; KR 100711188 B1 20070424; KR 20020091831 A 20021206; US 2004099347 A1 20040527; US 2007029013 A1 20070208; US 7128790 B2 20061031; US 7819990 B2 20101026

DOCDB simple family (application)

FR 0101440 W 20010511; AT 01934103 T 20010511; AU 6041201 A 20010511; DE 60141900 T 20010511; EP 01934103 A 20010511; ES 01934103 T 20010511; FR 0006088 A 20000512; JP 2001582794 A 20010511; KR 20027015181 A 20021112; US 27581403 A 20030214; US 46450206 A 20060815