

Title (en)

Use of a microcrystalline iron-based alloy as a magnetic material for a fault current-protective switch

Title (de)

Verwendung einer feinkristallinen Eisen-Basis-Legierung als Magnetwerkstoff für Fehlerstrom-Schutzschalter

Title (fr)

Application d'un alliage microcristallin à base de fer pour disjoncteur de protection à courant de défaut

Publication

**EP 0392204 B1 19961106 (DE)**

Application

**EP 90104798 A 19900314**

Priority

DE 3911480 A 19890408

Abstract (en)

[origin: EP0392204A2] In magnetic core materials for fault current protective switches, a high constancy of the magnetic properties is required over the entire application temperature range from -25 DEG C to +80 DEG C. In the case of the known magnetic core materials with a high nickel content of the permalloy type, this requires a special additional anneal. This can be dispensed with if the magnetic core material used is an iron-based alloy with an iron content of more than 60 atomic %, more than 50% of whose structure consists of fine crystalline grains having a grain size of less than 100 nm and which has a saturation induction of more than 1.1 T and also a remanence ratio of less than 0.7. <IMAGE>

IPC 1-7

**H01H 83/14**; H02H 3/33

IPC 8 full level

**H01F 1/14** (2006.01); **H01F 1/153** (2006.01); **H01H 83/14** (2006.01); **H02H 3/33** (2006.01)

CPC (source: EP)

**H01F 1/15308** (2013.01); **H01H 83/144** (2013.01)

Citation (examination)

ELEKTRONIK Nr. 22, 30. Oktober 1987, MÜNCHEN Seiten 99 - 112; R.BOLL, H.R.HILZINGER: 'Weichmagnetische kristalline und amorphe Metalle' \*Seite 105, rechte Spalte, Zeile 18 - Zeile 29; Abbildung 8\*

Cited by

EP0575639A1; EP0635922A1; EP0797282A3; EP0921541A1; FR2772181A1; EP1154539A1; DE19702371A1; EP1710812A1; EP0691662A1; EP0921540A1; FR2772182A1; US8344830B2; WO9609639A1; WO2012069967A1; EP2416329A1; WO2012017421A1; US8699190B2; US10892090B2

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