Title (en)

CURRENT TRANSFORMER WITH A DIRECT CURRENT TOLERANCE

Title (de)

STROMWANDLER MIT GLEICHSTROMTOLERANZ

Title (fr)

TRANSFORMATEUR DE COURANT A TOLERANCE VIS-A-VIS DU COURANT CONTINU

Publication

EP 1114429 B1 20031112 (DE)

Application

EP 99969529 A 19990916

Priority

- DE 9902955 W 19990916
- DE 19842710 A 19980917

Abstract (en)

[origin: WO0017897A1] The invention relates to a current transformer for an alternating current which has direct current tolerances. The current transformer consists of at least one converter core with a primary winding and at least one secondary winding, a burden resistance being connected parallel thereto and closing the secondary circuit with a low resistance. A closed annular core without an air gap is used as the converter core, said annular core consisting of a strip which in turn consists of an amorphous, ferromagnetic alloy which is almost free of magnetorestrictions and which has a permeability mu < 1400. The following alloys have been shown to be particularly suitable for an annular strip core of this kind: cobalt-based alloys, essentially of the following formula: Coa(Fe1-xMnx)bNicXdSieBfCg wherein X is at least one of the elements V, Nb, Ta, Cr, Mo, W, Ge or P, a-f are given in atom %, and a, b, c, d, e, f, g and x satisfy the following conditions: 40 </= a </= 82; 2 </= b </= 10; 0 </= c </= 30; 0 </= d </= 5; 0 </= e </= 15; 7 </= f </= 26; 0 </= g </= 3; with 15 </= d + e + f + g </= 30 and 0 </= x < 1.

IPC 1-7

H01F 38/28; H01F 1/153

IPC 8 full level

H01F 1/153 (2006.01); **H01F 27/24** (2006.01); **H01F 38/28** (2006.01)

CPC (source: EP US)

H01F 1/15316 (2013.01 - EP US); **H01F 38/28** (2013.01 - EP US); Y10T 428/12 (2015.01 - EP US); Y10T 428/12014 (2015.01 - EP US)

Cited by

DE102008051561B4; DE102008051561A1; EP2343715A1; DE102010004223A1; US8813355B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 0017897 A1 20000330; DE 59907740 D1 20031218; EP 1114429 A1 20010711; EP 1114429 B1 20031112; JP 2002525863 A 20020813; JP 4755340 B2 20110824; US 6563411 B1 20030513

DOCDB simple family (application)

DE 9902955 W 19990916; DE 59907740 T 19990916; EP 99969529 A 19990916; JP 2000571471 A 19990916; US 78729601 A 20010504