

Title (en)

USE OF A FINE CRYSTALLINE IRON-BASED ALLOY AS A MAGNET CORE IN AN INTERFACE TRANSFORMER

Publication

**EP 0392202 A3 19910403 (DE)**

Application

**EP 90104796 A 19900314**

Priority

DE 3911618 A 19890408

Abstract (en)

[origin: EP0392202A2] In the new digital ISDN communication system, transformation between the mains terminal (2) and terminal units (3) takes place via the so-called S0 interface by means of interface transformers (6, 11). Since the power supply to the terminal units also takes place partly via said transformers, a current imbalance in the conductors (7, 8) or (9, 10) results in a premagnetisation of the transformers. The ISDN requirements imposed on the transformers consequently have to be met even with direct current premagnetisation. Compact transformers with a simple winding structure which meet the ISDN requirements have, according to the invention, a magnet core material consisting of a fine crystalline iron-based alloy containing more than 60 atomic % of iron, more than 50% of whose structure consists of fine crystalline grains with a grain size of less than 100 nm and which has a remanence ratio of less than 0.2 and a permeability in the range from 20,000 to 50,000. <IMAGE>

IPC 1-7

**H01F 3/00**; **H01F 1/153**

IPC 8 full level

**H01F 1/14** (2006.01); **C22C 38/00** (2006.01); **H01F 1/153** (2006.01); **H01F 3/00** (2006.01); **H01F 3/08** (2006.01)

CPC (source: EP US)

**H01F 1/15308** (2013.01 - EP US); **H01F 3/00** (2013.01 - EP US)

Citation (search report)

[AD] EP 0299498 A1 19890118 - HITACHI METALS LTD [JP]

Cited by

EP0794541A1; EP0637038A3; US5725686A; KR100222442B1

Designated contracting state (EPC)

DE FR GB IT NL SE

DOCDB simple family (publication)

**EP 0392202 A2 19901017**; **EP 0392202 A3 19910403**; **EP 0392202 B1 19960612**; DE 3911618 A1 19901018; DE 59010366 D1 19960718; JP H02295101 A 19901206; JP H0828290 B2 19960321; US 5074932 A 19911224

DOCDB simple family (application)

**EP 90104796 A 19900314**; DE 3911618 A 19890408; DE 59010366 T 19900314; JP 9196190 A 19900406; US 49792790 A 19900323