Title (en)

HOLDING DEVICE FOR HOLDING A SOFT-MAGNETIC STACKED CORE OF A TRANSFORMER AND TRANSFORMER

Title (de)

HALTEVORRICHTUNG ZUM HALTEN EINES WEICHMAGNETISCHEN TRANSFORMATORENSTAPELKERNS SOWIE TRANSFORMATOR

Title (fr)

DISPOSITIF DE RETENUE UN NOYAU COMPACT MAGNÉTIQUE DOUX DE TRANSFORMATEUR ET TRANSFORMATEUR

Publication

EP 3503134 A1 20190626 (DE)

Application

EP 17209160 A 20171220

Priority

EP 17209160 A 20171220

Abstract (en)

[origin: WO2019122067A1] The invention relates to a retaining device (5) for retaining a soft-magnetic stacked transformer core (2) having layers with an amorphous and/or nanocrystalline microstructure made of an iron alloy, wherein the stacked transformer core (2) has two coil limbs (3) running parallel to one another and two yokes (4) connected to mutually opposite ends of the coil limbs (3). The retaining device (5) has two retaining units (6, 7), which can each be arranged on one of the two yokes (4) such that the retaining units (6, 7) are arranged at mutually opposite end regions of the stacked transformer core (2), and also has at least one mechanical fixing means (8), which acts on the two retaining units (6, 7) and via which the two retaining units (6, 7) are connected to one another such that they can be released in a non-destructive manner. In order to provide a more energy-efficient transformer (1), the retaining device (5) has at least one spacer (9), which is clamped in between the retaining units (6, 7), and at least one spring element, which can be arranged between at least one retaining unit (6, 7) and the stacked transformer core (2), wherein the retaining device (5) is designed such that, when the stacked transformer core (2) is arranged on the retaining device (5), the spring element is in a state in which it has been elastically deformed by the resulting, at least indirect contact with the stacked transformer core (2).

Abstract (de)

Die Erfindung betrifft eine Haltevorrichtung (5) zum Halten eines weichmagnetischen Transformatorenstapelkerns (2) mit Schichten mit einer amorphen und/oder nanokristallinen Gefügestruktur aus einer Eisenlegierung, wobei der Transformatorenstapelkern (2) zwei parallel zueinander verlaufende Spulenschenkel (3) und zwei mit einander gegenüberliegenden Enden der Spulenschenkel (3) verbundene Joche (4) aufweist. Die Haltevorrichtung (5) weist zwei Halteeinheiten (6, 7), die jeweils derart an einem der beiden Joche (4) anordbar sind, dass die Halteeinheiten (6, 7) an einander gegenüberliegenden Endbereichen des Transformatorenstapelkerns (2) angeordnet sind, und wenigstens ein an den beiden Halteeinheiten (6, 7) angreifendes mechanisches Fixiermittel (8), über das die beiden Halteeinheiten (6, 7) zerstörungsfrei lösbar miteinander verbunden sind, auf. Um einen energieeffizienteren Transformator (1) bereitzustellen, weist die Haltevorrichtung (5) wenigstens einen zwischen den Halteeinheiten (6, 7) eingespannten Abstandhalter (9) und wenigstens ein zwischen wenigstens einer Halteeinheit (6, 7) und dem Transformatorenstapelkern (2) anordbares Federelement auf, wobei die Haltevorrichtung (5) derart ausgebildet ist, dass das Federelement bei an der Haltevorrichtung (5) angeordnetem Transformatorenstapelkern (2) durch einen dabei gegebenen zumindest mittelbaren Kontakt mit dem Transformatorenstapelkern (2) elastisch verformt ist.

IPC 8 full level

H01F 3/02 (2006.01); **H01F 27/06** (2006.01); **H01F 27/245** (2006.01); **H01F 27/26** (2006.01); **H01F 27/30** (2006.01)

CPC (source: EP)

H01F 3/02 (2013.01); **H01F 27/06** (2013.01); **H01F 27/245** (2013.01); **H01F 27/263** (2013.01); **H01F 27/266** (2013.01); **H01F 27/306** (2013.01)

Citation (applicant)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3503134 A1 20190626; **EP 3503134 B1 20200129**; BR 112020012467 A2 20201124; CL 2020001634 A1 20201204; ES 2785661 T3 20201007; HR P20200654 T1 20200710; HU E049879 T2 20201028; PE 20210831 A1 20210505; PL 3503134 T3 20200921; PT 3503134 T 20200506; RS 60246 B1 20200630; SA 520412246 B1 20221105; SG 11202005608Y A 20200729; SI 3503134 T1 20200831; WO 2019122067 A1 20190627

DOCDB simple family (application)

EP 17209160 A 20171220; BR 112020012467 A 20181220; CL 2020001634 A 20200617; EP 2018086077 W 20181220; ES 17209160 T 20171220; HR P20200654 T 20200423; HU E17209160 A 20171220; PE 2020000774 A 20181220; PL 17209160 T 20171220; PT 17209160 T 20171220; RS P20200478 A 20171220; SA 520412246 A 20200617; SG 11202005608Y A 20181220; SI 201730232 T 20171220