Title (en)

BASIC MODULE FOR MAGNETIC CORE OF AN ELECTRICAL TRANSFORMER, MAGNETIC CORE COMPRISING SAID BASIC MODULE, METHOD FOR MANUFACTURING SAID MAGNETIC CORE, AND TRANSFORMER COMPRISING SAID MAGNETIC CORE

Title (de)

BASISMODUL FÜR MAGNETKERN EINES ELEKTRISCHEN TRANSFORMATORS, MAGNETKERN MIT DIESEM BASISMODUL, VERFAHREN ZUR HERSTELLUNG DIESES MAGNETKERNS UND TRANSFORMATOR MIT DIESEM MAGNETKERN

Title (fr)

MODULE ÉLÉMENTAIRE DE NOYAU MAGNÉTIQUE DE TRANSFORMATEUR ÉLECTRIQUE, NOYAU MAGNÉTIQUE LE COMPORTANT ET SON PROCÉDÉ DE FABRICATION, ET TRANSFORMATEUR LE COMPORTANT

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Application

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Abstract (en)

[origin: WO2016083866A1] The invention relates to a basic module of a magnetic core of a wound electrical transformer. Said basic module is characterized in that it consists of a first (1, 2) and second (3, 4) winding that are placed one on top of the other and made of a first and second material, respectively. Said first material is a crystal material having a saturation magnetization (Js) greater than or equal to 1.5 T and magnetic losses less than 20 W/kg in sine waves having a frequency of 400 Hz, for maximum induction of 1 T, and said second material is a material having an apparent saturation magnetostriction (λsat) less than or equal to 5 ppm and magnetic losses less than 20 W/kg in sine waves having a frequency of 400 Hz, for maximum induction of 1 T. The cross-sections (S1, S2) of the first winding (1, 2) and cross-sections (S3, S4) of the second winding (3, 4) are such that the proportion (S1/(S1 + S3); S2/(S2 + S4)) of the first material, having a high saturation magnetization (Js), compared to the cross-section of both materials together, is between 2% and 50%, preferably between 4% and 40%. The invention also relates to a magnetic core of an electrical transformer, comprising at least one such basic module, to a method for manufacturing said magnetic core, and to a transformer comprising said magnetic core.

IPC 8 full level

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