

Title (en)
METHOD FOR MANUFACTURING A CURRENT TRANSFORMER CORE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES STROMWANDLERKERNS

Title (fr)
PROCÉDÉ DE FABRICATION D'UN NOYAU DE TRANSFORMATEUR DE COURANT

Publication
EP 3176797 B1 20200902 (EN)

Application
EP 15827190 A 20150727

Priority
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• JP 2015071243 W 20150727

Abstract (en)
[origin: EP3176797A1] A manufacturing method of a current transformer core includes: the step of providing a core element formed by winding or layering a Fe-based amorphous alloy ribbon whose thickness is not more than 15 μm and which can be converted into nanocrystals; a longitudinal-field heat treatment step which includes performing a heat treatment on the core element in the presence of a magnetic field of not less than 100 A/m applied in a magnetic path direction of the core element, thereby forming a core; and a transverse-field heat treatment step which includes, after the longitudinal-field heat treatment step, performing a heat treatment on the core in the presence of a magnetic field applied in a direction perpendicular to the magnetic path direction of the core, thereby forming a core. $\mu_r(25)$ is adjusted by the transverse-field heat treatment step to a value between $0.4 \times \mu_r(\text{max})(25)$ and $0.9 \times \mu_r(\text{max})(25)$ where $\mu_r(\text{max})(T)$ is $\mu_r(T)$ achieved by the longitudinal-field heat treatment step, and $\mu_r(T)$ is an amplitude magnetic permeability of the core measured at a temperature T ($^{\circ}\text{C}$) in the presence of an AC magnetic field of frequency $f=50$ Hz and amplitude $H=1.0$ A/m.

IPC 8 full level
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