

Title (en)

NON-GRAIN ORIENTED ELECTRIC SHEET STEEL OR STRIP AND METHOD FOR THE PRODUCTION THEREOF

Title (de)

NICHTKORNORIENTIERTES ELEKTROBLECH ODER -BAND UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

TOLE OU BANDE MAGNETIQUE A GRAINS NON ORIENTES ET PROCEDE DE FABRICATION DE LADITE TOLE OU BANDE

Publication

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Application

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Abstract (en)

[origin: WO03014404A1] The invention relates to a non-grain oriented electric sheet steel or strip obtained from a steel melt of the following composition (in wt. %): Si:  $\leq 1.8$  %, Al:  $< 1$  %, C:  $\leq 0.0200$  %, Mn  $< 0.5$  %, Sn:  $\leq 0.03$  %, Sb:  $\leq 0.1$  %, P:  $\leq 0.1$  %, S:  $< 0.02$  %, Ti:  $\leq 0.0100$  %, N:  $\leq 0.0100$  %, O:  $\leq 0.0100$  %, B:  $\leq 0.0100$  % and, as the remainder, iron and unavoidable impurities, whereby the electric sheet steel or strip, over the course of a cooling starting from a temperature of at least 1150 DEG C, firstly has an austenitic structure and then a mixed structure consisting of austenite and ferrite, and finally it has a ferritic structure after reaching a temperature less than 1050 DEG C. The electric sheet steel or strip has, at a polarization of 1.5 T and a frequency of 50 Hz, a hysteresis loss P1.5 that is less than 4.7 W/kg, at a magnetic field strength of 2500 A/m, a magnetic polarization B25 equal to at least 1.60 T and, at a frequency of 50 Hz, a magnetic permeability  $\mu$  1.5 of at least 1500. The electric sheet steel or strip constituted in such a manner has, at the same time, low hysteresis losses and a good saturation magnetization, which is expressed in a higher permeability  $\mu$ , and can be easily produced.

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