

Title (en)

Process for producing grain-oriented electrical steel sheet and magnetic cores produced therefrom

Title (de)

Verfahren zur Erzeugung kornorientierten Elektrostahlbands und daraus hergestellter Magnetkerne

Title (fr)

Procédé de fabrication de bandes d'acier électrique à grains orientés et de noyaux magnétiques à partir de ceux-ci

Publication

EP 0651061 B1 19991222 (DE)

Application

EP 94116869 A 19941026

Priority

DE 4337605 A 19931101

Abstract (en)

[origin: EP0651061A1] The invention relates to a process for producing grain-oriented magnetic steel strip which is readily magnetisable in four directions in the rolling plane and to magnet cores for rotary (rotating) and non-rotary (non-rotating) electrical machines (electric machinery). The process is characterised in that steel slabs having a C content of < 0.10% and an Si content of from 0 to 2% and contents of Al, Mn, S, N, O in the concentrations usual for magnetic steel strip are preheated to about 1250 DEG C, are roughed (cogged, bloomed) in from 5 to 9 passes with small reductions for each individual pass and are finish-rolled in a separate roll line, with an entrance temperature of from 930 DEG C to 1100 DEG C and a finishing temperature of from 800 DEG C to 950 DEG C, with reductions per pass of 35%, and the hot strip thus produced is reeled without forced cooling (controlled cooling, ducted cooling) at a temperature of > 700 DEG C and after cooling, while an amount of deformation (a degree of deformation) of > 86% is maintained, is subjected to cold working (cold forming) which is followed by an interannealing stage under a neutral gas at from 500 DEG C to 750 DEG C for from 0.5 h to 20 h and further cold working at from 2 to 15% and subsequent final annealing at temperatures around 800 DEG C in an at least intermittently decarburising atmosphere. <IMAGE>

IPC 1-7

C21D 8/12

IPC 8 full level

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CPC (source: EP)

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Cited by

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