

Title (en)

PROCESS FOR PRODUCING COLD-ROLLED STEEL STRIP HAVING A SI-CONTENT OF AT LEAST 3.2 WT.-% USED FOR ELECTROMAGNETIC PURPOSES

Title (de)

VERFAHREN ZUM HERSTELLEN EINES KALTGEWALZTEN STAHLBANDES MIT EINEM SI-GEHALT VON MINDESTENS 3,2 GEW.-% FÜR ELEKTROMAGNETISCHE ANWENDUNGEN

Title (fr)

PROCEDE DE PRODUCTION DE FEUILLARD D'ACIER LAMINE A FROID AYANT UN TENEUR EN SI D'AU MOINS 3,2% EN POIDS DESTINE A DES UTILISATIONS ELECTROMAGNETIQUES

Publication

EP 1509627 B1 20050831 (DE)

Application

EP 03722586 A 20030502

Priority

- DE 10220282 A 20020507
- EP 0304588 W 20030502

Abstract (en)

[origin: US2006086429A1] The present invention relates to a cold-rolled steel strip or sheet in thicknesses of ≤ 0.70 mm for electromagnetic applications, consisting of a steel containing (in % by weight) C: $< 0.01\%$, Si: 3.2-7%, Al: $< 2\%$, Mn: $\leq 1\%$, the remainder being iron and usual impurities, which after smelting has been cast to form a base material, such as a slab, a thin slab, or a thin strip, which has then been heated through to temperature $T_{\text{SUB}} > R_{\text{SUB}} > 1000^\circ \text{C}$. and has been final hot-rolled at a hot-rolling final temperature $T_{\text{SUB}} > F_{\text{SUB}} > 800^\circ \text{C}$. to form a hot strip, which has then been cooled, starting from a temperature $T_{\text{SUB}} > C_{\text{SUB}}$ of the hot strip amounting to at least 750°C . but less than 850°C ., at a cooling speed $\Delta T / \Delta t$ of at least $400^\circ \text{C}/\text{min}$. to a temperature of less than 300°C ., subjected after cooling to a surface treatment such as mechanical descaling and/or pickling, after the surface treatment has been cold-rolled at a temperature amounting to maximum 500°C ., and has finally been final-annealed.

IPC 1-7

C21D 8/12; C22C 38/02

IPC 8 full level

C21D 8/12 (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **H01F 1/16** (2006.01)

CPC (source: EP US)

C21D 8/1211 (2013.01 - EP US); **C21D 8/1255** (2013.01 - EP US); **C21D 8/1272** (2013.01 - EP US); **C21D 9/52** (2013.01 - EP US); **C22C 38/004** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US)

Cited by

DE102021115174A1; WO2022036381A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 03095683 A1 20031120; AT E303455 T1 20050915; AU 2003229765 A1 20031111; DE 10220282 C1 20031127; DE 50301115 D1 20051006; EP 1509627 A1 20050302; EP 1509627 B1 20050831; ES 2248742 T3 20060316; JP 2005530033 A 20051006; US 2006086429 A1 20060427

DOCDB simple family (application)

EP 0304588 W 20030502; AT 03722586 T 20030502; AU 2003229765 A 20030502; DE 10220282 A 20020507; DE 50301115 T 20030502; EP 03722586 A 20030502; ES 03722586 T 20030502; JP 2004503673 A 20030502; US 51376705 A 20050824