

Title (en)

COLD-ROLLED SHEET OR STRIP AND PROCESS FOR MANUFACTURING THEM

Title (de)

KALTGEWALZTES BLECH ODER BAND UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

TOLE OU FEUILLARD LAMINES A FROID ET PROCEDE POUR LEUR FABRICATION

Publication

EP 0400031 B2 20020102 (DE)

Application

EP 89901844 A 19890127

Priority

- DE 3803064 A 19880129
- DE 3843732 A 19881222
- DE 8900057 W 19890127

Abstract (en)

[origin: US5139580A] In order to produce sheet possessing good forming properties, in particular for rotationally symmetrical deep-drawings, a low-carbon steel containing not more than 0.009% N is alloyed with 0.01 to 0.94% Ti and in certain cases with 0.01 to 0.06% Nb and continuously cast. The plate slabs are heated to a temperature above 1120 degrees Celsius, rolled to obtain a hot strip above the Ar3 point, and would at 520+/-100 degrees Celsius. After cold rolling to the desired fine sheet thickness, the steel strip is annealed by recrystallization, skin-passes and made into sheets.

IPC 1-7

C21D 8/04; C22C 38/14

IPC 8 full level

C21D 9/48 (2006.01); **C21D 8/04** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **C22C 38/14** (2006.01)

CPC (source: EP US)

C21D 8/0426 (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C21D 8/0436** (2013.01 - EP US); **C21D 8/0473** (2013.01 - EP US)

Cited by

US6749696B2

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

US 5139580 A 19920818; DD 285298 A5 19901212; DD 285298 B5 19990128; DE 3803064 C1 19890406; DE 3803064 C2 19950420; DE 3843732 A1 19900705; DE 3843732 C2 20010510; DE 58906176 D1 19931216; EP 0400031 A1 19901205; EP 0400031 B1 19931110; EP 0400031 B2 20020102; ES 2018975 A6 19910516; GR 1000537 B 19920825; JP H03503185 A 19910718; JP H0814003 B2 19960214; WO 8907158 A1 19890810

DOCDB simple family (application)

US 55517190 A 19900718; DD 32529689 A 19890127; DE 3803064 A 19880129; DE 3843732 A 19881222; DE 58906176 T 19890127; DE 8900057 W 19890127; EP 89901844 A 19890127; ES 8904050 A 19891127; GR 890100609 A 19890127; JP 50168689 A 19890127