

Title (en)

Process for manufacturing ferritic stainless steel thin strips

Title (de)

Verfahren zum Herstellen von dünnen ferritischen rostfreien Stahlbändern

Title (fr)

Procédé de fabrication de bandes minces d'acier inoxydable ferritique

Publication

**EP 0881305 B1 20030129 (FR)**

Application

**EP 98401090 A 19980506**

Priority

FR 9706576 A 19970529

Abstract (en)

[origin: EP0881305A1] Manufacture of less than 10 mm thick strip of ferritic stainless steel ( NOTGREATER 0.012% C, NOTGREATER 1% Mn, NOTGREATER 1% Si, NOTGREATER 0.040% P, NOTGREATER 0.030% S and 16-18% Cr) involves (a) (naturally) cooling twin-roll continuously cast strip without holding in the austenitic transformation region; (b) optionally hot rolling at 900-1150 degrees C with  $\geq 5\%$  thickness reduction; (c) coiling at between 600 degrees C and the martensitic transformation temperature (Ms); (d) cooling at NOTGREATER 300 degrees C/hr. to between 200 degrees C and ambient temperature; and (e) bell annealing, preferably at 800-850 degrees C for  $\geq 4$  hrs. Preferably, step (a) is carried out by cooling the strip immediately after leaving the casting rolls, at  $\geq 10$  degrees C/sec. down to 600 degrees C. Also claimed is ferritic stainless steel strip made by the above process.

IPC 1-7

**C21D 6/00**; **C21D 8/02**

IPC 8 full level

**B22D 11/00** (2006.01); **B22D 11/06** (2006.01); **B22D 11/106** (2006.01); **B22D 11/124** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C21D 9/52** (2006.01); **C22C 38/00** (2006.01); **C22C 38/18** (2006.01); **C21D 1/02** (2006.01); **C21D 1/19** (2006.01)

CPC (source: EP KR US)

**B22D 11/124** (2013.01 - EP KR US); **C21D 1/19** (2013.01 - KR); **C21D 1/26** (2013.01 - KR); **C21D 6/002** (2013.01 - KR); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0215** (2013.01 - EP KR US); **C21D 8/0226** (2013.01 - KR); **C21D 1/02** (2013.01 - EP US); **C21D 1/19** (2013.01 - EP US); **C21D 2211/008** (2013.01 - KR)

Cited by

DE102005063058B3; EP1099773A4; EP1118687A1; FR2790485A1; CN101607266A; US6588494B1; USRE40950E; WO0053817A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)

**EP 0881305 A1 19981202**; **EP 0881305 B1 20030129**; AT E231925 T1 20030215; AU 6483598 A 19981203; AU 706022 B2 19990603; BR 9801552 A 19990601; CA 2238803 A1 19981129; CA 2238803 C 20070220; CN 1078113 C 20020123; CN 1212189 A 19990331; CZ 165898 A3 19990811; CZ 291528 B6 20030312; DE 69810988 D1 20030306; DE 69810988 T2 20031127; DK 0881305 T3 20030526; ES 2191263 T3 20030901; FR 2763960 A1 19981204; FR 2763960 B1 19990716; ID 20384 A 19981203; JP 4224733 B2 20090218; JP H10330842 A 19981215; KR 100538683 B1 20060323; KR 19980087462 A 19981205; MX PA98004218 A 20040910; PL 187133 B1 20040531; PL 326582 A1 19981207; RO 120322 B1 20051230; RU 2192483 C2 20021110; SK 284091 B6 20040908; SK 67898 A3 19981202; TR 199800976 A2 19991021; TR 199800976 A3 19991021; TW 369446 B 19990911; UA 55398 C2 20030415; US 6106638 A 20000822; ZA 984147 B 19981125

DOCDB simple family (application)

**EP 98401090 A 19980506**; AT 98401090 T 19980506; AU 6483598 A 19980512; BR 9801552 A 19980528; CA 2238803 A 19980527; CN 98102980 A 19980528; CZ 165898 A 19980528; DE 69810988 T 19980506; DK 98401090 T 19980506; ES 98401090 T 19980506; FR 9706576 A 19970529; ID 980784 A 19980528; JP 14893198 A 19980529; KR 19980019509 A 19980528; MX 9804218 A 19980527; PL 32658298 A 19980529; RO 9801021 A 19980528; RU 98110130 A 19980528; SK 67898 A 19980521; TR 9800976 A 19980529; TW 87107288 A 19980512; UA 98052764 A 19980527; US 7553398 A 19980511; ZA 984147 A 19980518