

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 ≥ 4 hrs. Preferably, step (a) is carried out by cooling the strip immediately after leaving the casting rolls, at ≥ 10 degrees C/sec. down to 600 degrees C. Also claimed is ferritic stainless steel strip made by the above process.

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IPC 8 full level

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CPC (source: EP KR US)

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Cited by

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

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