

Title (en)  
Ferritic stainless steel sheet excellent in press formability and secondary formability and its manufacturing method

Title (de)  
Rostfreier ferritischer Bandstahl mit hervorragenden Press- sowie sekundären Verformungseigenschaften und Verfahren zu seiner Herstellung

Title (fr)  
Acier inoxydable ferritique présentant une aptitude élevée à la déformation par pression et à la déformation secondaire et son procédé de fabrication

Publication  
**EP 1484424 A1 20041208 (EN)**

Application  
**EP 04012345 A 20040525**

Priority  
JP 2003159275 A 20030604

Abstract (en)  
A ferritic stainless steel sheet has a composition of C up to 0.02 mass %, Si up to 0.8 mass %, Mn up to 1.5 mass %, P up to 0.050 mass %, S up to 0.01 mass %, 8.0-35.0 mass % of Cr, N up to 0.05 mass %, 0.05-0.40 mass % of Ti and 0.10-0.50 mass % of Nb with a product of (%Ti×%N) less than 0.005. Precipitates of 0.15 μm or more in particle size except TiN are distributed in a steel matrix at a rate of 5000-50000/mm<sup>2</sup>. The steel sheet is manufactured by hot-rolling a slab at a finish-temperature of 800 DEG C or lower, annealing the hot-rolled steel sheet at 450-1080 DEG C, cold-rolling the hot-rolled steel sheet in accompaniment with intermediate-annealing at a temperature within a range of from (a recrystallization-finishing temperature -100 DEG C) to (a recrystallization-finishing temperature) and then finish-annealing the cold-rolled steel sheet at 1080 DEG C or lower. The ferritic stainless steel sheet is press-formed with high dimensional accuracy and excellent secondary formability due to controlled distribution of the precipitates. <IMAGE>

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IPC 8 full level  
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• [A] EP 0834590 A1 19980408 - NIPPON STEEL CORP [JP]  
• [A] EP 1308532 A2 20030507 - KAWASAKI STEEL CO [JP]  
• [A] PATENT ABSTRACTS OF JAPAN vol. 0163, no. 34 (C - 0964) 21 July 1992 (1992-07-21)  
• [A] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 12 26 December 1996 (1996-12-26)

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