

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/mm². 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>

IPC 1-7
C22C 38/26; **C22C 38/28**; **C21D 8/02**

IPC 8 full level
C21D 9/46 (2006.01); **C21D 8/04** (2006.01); **C22C 38/00** (2006.01); **C22C 38/18** (2006.01); **C22C 38/28** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)
C21D 8/0405 (2013.01 - EP US); **C21D 8/0468** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/18** (2013.01 - KR); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C21D 8/0463** (2013.01 - EP US); **C21D 8/0473** (2013.01 - EP US)

Citation (search report)
• [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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CN101979166A; EP2460900A4; EP1882756A1; EP3521472A4; CN113005269A; US8440029B2; US11740038B2

Designated contracting state (EPC)
DE ES FR

DOCDB simple family (publication)
EP 1484424 A1 20041208; **EP 1484424 B1 20100825**; CN 100363523 C 20080123; CN 1572895 A 20050202; DE 602004028780 D1 20101007; ES 2357303 T3 20110425; JP 2004360003 A 20041224; JP 3886933 B2 20070228; KR 100595383 B1 20060630; KR 20040104939 A 20041213; US 2004244884 A1 20041209; US 2009165905 A1 20090702

DOCDB simple family (application)
EP 04012345 A 20040525; CN 200410046247 A 20040604; DE 602004028780 T 20040525; ES 04012345 T 20040525; JP 2003159275 A 20030604; KR 20040041004 A 20040604; US 39696609 A 20090303; US 86034904 A 20040603