

Title (en)

Austenitic stainless steel excellent in fine blankability

Title (de)

Rostfreier austenitischer Stahl mit ausgezeichneter Stanzbarkeit

Title (fr)

Acier inoxydable austénitique avec une facilité de poinçonnage excellente

Publication

EP 1156125 B1 20060830 (EN)

Application

EP 01110998 A 20010507

Priority

JP 2000142644 A 20000516

Abstract (en)

[origin: EP1156125A2] The newly proposed austenitic stainless steel has composition consisting of (C+1/2N) up to 0.060 mass %, Si up to 1.0 mass %, Mn up to 5 mass %, S up to 0.006 mass %, 15-20 mass % Cr, 5-12 mass % Ni, Cu up to 5 mass %, 0-3.0 mass % Mo and the balance being Fe except inevitable impurities under the condition that a value Md30 (representing a ratio of a strain-induced martensite) defined by the under-mentioned formula is controlled within a range of -60 to -10. Hardness increase of the steel sheet after being cold-rolled is preferably 20% or more as Vickers hardness. A metallurgical structure of the steel sheet is preferably adjusted to grain size number of #8 to #11 in a finish annealed state. The steel sheet is blanked with high dimensional accuracy, and a die life is also prolonged. $\text{Md30} = 551 - 462(\text{C} + \text{N}) - 9.2\text{Si} - 29(\text{Ni} + \text{Cu}) - 8.1\text{Mn} - 13.7\text{Cr} - 18.5\text{Mo}$

IPC 8 full level

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CPC (source: EP KR US)

C21D 8/0205 (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/58** (2013.01 - KR); **C21D 8/0405** (2013.01 - EP US)

Cited by

EP2072631A1; EP3561125A4; EP2025770A1; FR2864108A1; EP1249513A1; US11299799B2; WO2006016010A1

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