

Title (en)  
HIGH STRENGTH THIN STEEL SHEET EXCELLENT IN RESISTANCE TO DELAYED FRACTURE AFTER FORMING AND METHOD FOR PREPARATION THEREOF, AND AUTOMOBILE PARTS REQUIRING STRENGTH MANUFACTURED FROM HIGH STRENGTH THIN STEEL SHEET

Title (de)  
HOCHFESTES DÜNNES STAHLBLECH MIT HERVORRAGENDER BESTÄNDIGKEIT GEGENÜBER VERZÖGERTEM BRUCH NACH DEM UMFORMEN UND HERSTELLUNGSVERFAHREN DAFÜR UND AUS HOCHFESTEM DÜNNEM STAHLBLECH GEFERTIGTE FESTIGKEIT ERFORDERNDE AUTOMOBILTEILE

Title (fr)  
TOLE MINCE EN ACIER A RESISTANCE ELEVEE PRESENTANT UNE RESISTANCE EXCELLENTE A LA RUPTURE DIFFEREE APRES FORMATION ET PROCEDE DE PREPARATION ASSOCIE, ET PARTIES AUTOMOBILES NECESSITANT UNE CERTAINE RESISTANCE FABRIQUEES A PARTIE DE TOLE MINCE EN ACIER A RESISTANCE ELEVEE

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Application  
**EP 03817075 A 20030527**

Priority  
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Abstract (en)  
[origin: EP1637618A1] Steel sheets containing residual austenite of not more than 7 vol.%, crystallized and/or precipitated compounds with particle diameters of 0.01 to 5.0  $\mu\text{m}$  of 100 to 100000 particle/mm<sup>2</sup> and C of 0.05 to 0.3 mass%, Si of not more than 3.0 mass%, Mn of 0.01 to 3.0 mass%, P of not more than 0.02 mass%, S of not more than 0.02 mass%, Al of 0.01 to 3.0 mass%, N of not more than 0.01 mass% and Mg of 0.0002 to 0.01 mass%, with the remainder comprising iron and unavoidable impurities.

IPC 8 full level  
**C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01)

CPC (source: EP US)  
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Citation (search report)

- [A] EP 1143023 A1 20011010 - NIPPON STEEL CORP [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 2002, no. 02 2 April 2002 (2002-04-02)
- [X] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 08 30 June 1999 (1999-06-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04 31 August 2000 (2000-08-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 01 29 January 1999 (1999-01-29)
- See references of WO 2004106571A1

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CN102031457A; EP3269836A4; EP2455507A1; EP2216422A4; US10655201B2; US8679265B2; WO2015185956A1; US10612107B2; US11047020B2

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