

Title (en)

COMPOSITE STRUCTURE TYPE HIGH TENSILE STRENGTH STEEL PLATE, PLATED PLATE OF COMPOSITE STRUCTURE TYPE HIGH TENSILE STRENGTH STEEL AND METHOD FOR THEIR PRODUCTION

Title (de)

KOMPOSITSTRUKTUR-STAHLPLATTE MIT HOHER ZUGFESTIGKEIT, BESCHICHTETE KOMPOSITSTRUKTUR-STAHLPLATTE MIT HOHER ZUGFESTIGKEIT UND DEREN HERSTELLUNGSVERFAHREN

Title (fr)

TOLE D'ACIER LAMINEE A FROID PRESENTANT UNE RESISTANCE ELEVEE A LA TRACTION DU TYPE STRUCTURE COMPOSITE

Publication

**EP 1338667 A4 20050817 (EN)**

Application

**EP 01998666 A 20011127**

Priority

- JP 0110340 W 20011127
- JP 2000361273 A 20001128
- JP 2000361274 A 20001128
- JP 2001312687 A 20011010
- JP 2001312688 A 20011010

Abstract (en)

[origin: US2003129444A1] The invention proposes a high-strength dual-phase cold rolled steel sheet having an excellent deep drawability, wherein the steel sheet has a composition comprising C: 0.01-0.08 mass %, Si: not more than 2.0 mass %, Mn: not more than 3.0 mass %, P: not more than 0.10 mass %, S: not more than 0.02 mass %, A1: 0.005-0.20 mass %, N: not more than 0.02 mass % and V: 0.01-0.5 mass %, provided that V and C satisfy a relationship of  $0.5 \times C / 12 \leq V / 51 \leq 3 \times C / 12$ , and the remainder being Fe and inevitable impurities, and has a microstructure consisting of a ferrite phase as a primary phase and a secondary phase including martensite phase at an area ratio of not less than 1% to a whole of the microstructure and a high-strength dual-phase galvanized steel sheet comprising a galvanized coating on the above steel sheet as well as a method of producing the same.

IPC 1-7

**C22C 38/00; C21D 9/46; C23C 2/06**

IPC 8 full level

**C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/12** (2006.01); **C23C 2/02** (2006.01); **C23C 2/06** (2006.01); **C23C 2/40** (2006.01)

CPC (source: EP KR US)

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Citation (search report)

- [A] EP 0969112 A1 20000105 - NIPPON STEEL CORP [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12 29 October 1999 (1999-10-29)
- [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 14 5 March 2001 (2001-03-05)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 07 29 September 2000 (2000-09-29)
- [A] PATENT ABSTRACTS OF JAPAN vol. 011, no. 096 (C - 412) 26 March 1987 (1987-03-26)
- [A] PATENT ABSTRACTS OF JAPAN vol. 011, no. 273 (C - 445) 4 September 1987 (1987-09-04)
- See references of WO 0244434A1

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EP2636762A4; EP1682686A4; US10400301B2; US7608155B2; US7442268B2; US7879160B2; US8337643B2; US8366844B2; US7959747B2; US8435363B2; US9157138B2; WO2011036351A1; WO2011036352A1

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**US 2003129444 A1 20030710**; AU 2411802 A 20020611; AU 776043 B2 20040826; CA 2398126 A1 20020606; CN 1193110 C 20050316; CN 1419607 A 20030521; DE 60143907 D1 20110303; EP 1338667 A1 20030827; EP 1338667 A4 20050817; EP 1338667 B1 20110119; KR 20020073564 A 20020927; TW 520398 B 20030211; WO 0244434 A1 20020606

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