

Title (en)
COLD ROLLED STEEL SHEET AND GALVANIZED STEEL SHEET HAVING STRAIN AGING HARDENING PROPERTY AND METHOD FOR PRODUCING THE SAME

Title (de)
KALTGEWALZTES STAHLBLECH UND GALVANISIERTES STAHLBLECH MIT GUTEN RECKALTERUNGSEIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TOLE D'ACIER LAMINEE A FROID ET TOLE D'ACIER GALVANISEE POSSEDANT DES PROPRIETES DE DURCISSEMENT PAR ECROUISSAGE ET PAR PRECIPITATION ET PROCEDE DE PRODUCTION ASSOCIE

Publication
EP 1291448 B1 20060628 (EN)

Application
EP 01906128 A 20010214

Priority
• JP 0101004 W 20010214
• JP 2000156274 A 20000526
• JP 2000193717 A 20000628
• JP 2000328924 A 20001027
• JP 2000335803 A 20001102

Abstract (en)
[origin: EP1291448A1] An object of the present invention is to provide a cold-rolled steel sheet and an alloyed hot-dip galvanized steel sheet in which tensile strength is effectively increased by press forming and heat treatment while maintaining excellent deep drawability in press forming. Specifically, a steel composition contains less than 0.01% of C, 0.005 to 1.0% of Si, 0.01 to 1.0% of Mn, 0.005 to 0.050% of Nb, 0.005 to 0.030% of Al, 0.005 to 0.040% of N, 0.0005 to 0.0015% of B, 0.05% or less of P, and 0.01% or less of S, the balance substantially composed of Fe, in which the following equations (1) and (2) are satisfied:
$$\text{N} \% \geq 0.0015 + 14/93 \cdot \text{Nb} \% + 14/27 \cdot \text{Al} \% + 14/11 \cdot \text{B} \% \quad (1)$$
$$\text{C} \% \leq (12/93) \cdot \text{Nb} \% \quad (2)$$

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C21D 9/46** (2006.01); **C21D 9/48** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/12** (2006.01); **C22C 38/58** (2006.01); **C21D 1/18** (2006.01)

CPC (source: EP KR)
C21D 8/0236 (2013.01 - EP); **C21D 8/0273** (2013.01 - EP); **C21D 8/0426** (2013.01 - EP); **C21D 9/48** (2013.01 - EP); **C22C 38/00** (2013.01 - KR); **C22C 38/001** (2013.01 - EP); **C22C 38/004** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C21D 1/185** (2013.01 - EP); **C21D 8/0226** (2013.01 - EP); **C21D 8/0436** (2013.01 - EP); **C21D 8/0473** (2013.01 - EP); **C21D 2211/005** (2013.01 - EP); **C21D 2211/008** (2013.01 - EP)

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Designated contracting state (EPC)
BE DE FR GB IT

DOCDB simple family (publication)
EP 1291448 A1 20030312; **EP 1291448 A4 20040630**; **EP 1291448 B1 20060628**; CA 2379698 A1 20011129; CA 2379698 C 20090217; CN 1158398 C 20040721; CN 1386140 A 20021218; DE 60121162 D1 20060810; DE 60121162 T2 20061109; DE 60121233 D1 20060810; DE 60121233 T2 20061109; DE 60121234 D1 20060810; DE 60121234 T2 20061109; EP 1498506 A1 20050119; EP 1498506 B1 20060628; EP 1498507 A1 20050119; EP 1498507 B1 20060628; KR 20020019124 A 20020309; TW 565621 B 20031211; WO 0190431 A1 20011129

DOCDB simple family (application)
EP 01906128 A 20010214; CA 2379698 A 20010214; CN 01802186 A 20010214; DE 60121162 T 20010214; DE 60121233 T 20010214; DE 60121234 T 20010214; EP 04023082 A 20010214; EP 04023101 A 20010214; JP 0101004 W 20010214; KR 20027001080 A 20020125; TW 90103293 A 20010214