

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

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Application
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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:
$$\text{C} \leq \frac{12}{93} \cdot \text{Nb} + \frac{14}{93} \cdot \text{Nb} + \frac{14}{27} \cdot \text{Al} + \frac{14}{11} \cdot \text{B}$$

$$\text{C} \leq \frac{12}{93} \cdot \text{Nb} + \frac{14}{93} \cdot \text{Nb} + \frac{14}{27} \cdot \text{Al} + \frac{14}{11} \cdot \text{B}$$

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