

Title (en)

Niobium containing hot rolled steel sheet with high strength and good deep-drawing properties, and process for its manufacture

Title (de)

Niob enthaltendes warmgewalztes, hochfestes Stahlblech mit gute Tiefziehfähigkeit, und Verfahren zu ihrer Herstellung

Title (fr)

Tôle d'acier laminée à chaud à haute résistance et haute emboutissabilité refermant du niobium, et ses procédés de fabrication

Publication

EP 0747495 B1 20000119 (FR)

Application

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Priority

FR 9506746 A 19950608

Abstract (en)

[origin: EP0747495A1] Steel sheet comprises 0.5-1.5wt.% Mn, 0.01-0.10, pref. 0.010-0.020% Nb, 0.01-0.1% Al and up to 0.12% C, 0.3% Si, 0.1% P, 0.05% S, 1% Cr, also up to 0.05% of Ti not in the form of nitrides, sulphides or oxides. The structure comprises at least 75% of ferrite hardened by precipitation of carbides or carbonitrides of Nb or of Nb and Ti, the remainder comprising at least 10% martensite and possibly bainite and austenite. Also claimed are methods of making the steel sheet by hot-rolling followed by controlled cooling.

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IPC 8 full level

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CPC (source: EP US)

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Cited by

KR100578823B1; EP1002884A4; BE1013359A3; NL1016042C2; CN100381588C; DE10327383B4; DE10327383C5; US6821364B2; WO2004111279A3; WO0005422A1; WO0171047A1; EP3658692B1

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