Title (en)

COLD-ROLLED STEEL SHEET WITH SUPERIOR SHAPE FIXABILITY AND MANUFACTURING METHOD THEREFOR

Title (de)

KALTGEWALZTES STAHLBLECH MIT ÜBERLEGENER FORMFESTIGKEIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE D'ACIER LAMINÉE À FROID À CAPACITÉ DE FIXATION DE FORME SUPÉRIEURE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2907887 B1 20181205 (EN)

Application

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Priority

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Abstract (en)

[origin: EP2907887A1] Provided is a cold-rolled steel sheet with excellent shape fixability and a method for manufacturing the same. A steel material having a chemical composition containing 0.0010% to 0.0030% C, 0.05% or less Si, 0.1% to 0.5% Mn, 0.021% to 0.060% Ti, and 0.0005% to 0.0050% B on a mass basis such that B/C satisfies 0.5 or more is subjected to a hot rolling step in which the steel material is finish-rolled at a finishing delivery temperature of 870°C to 950°C and is coiled at a coiling temperature of 450°C to 630°C; a cold-rolling step in which cold rolling is performed at a rolling reduction of 90% or less; and an annealing step in which heating is performed up to a holding temperature in the range of 700°C to 850°C at an average heating rate of 1 °C/s to 30 °C/s in a temperature region not lower than 600°C after the cold rolling step, retention is performed for 30 s to 200 s, and cooling is then performed at a cooling rate of 3 °C/s or more in a temperature region down to 600°C, whereby a cold-rolled steel sheet having a microstructure dominated by ferrite with an average grain size of 10 μm to 30 μm, a proportional limit of 100 MPa or less, and excellent shape fixability is obtained.

IPC 8 full level

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