

Title (en)  
PROCESS FOR PRODUCTION OF COLD-ROLLED STEEL SHEET HAVING EXCELLENT PRESS MOLDABILITY, AND COLD-ROLLED STEEL SHEET

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES KALTGEWALZTEN STAHLBLECHS VON HERVORRAGENDER PRESSFORMBARKEIT SOWIE KALTGEWALZTES STAHLBLECH

Title (fr)  
PROCESSUS DE PRODUCTION D UNE TÔLE D ACIER LAMINÉE À FROID PRÉSENTANT UNE EXCELLENTE APTITUDE AU FORMAGE À LA PRESSE, ET TÔLE D ACIER LAMINÉE À FROID

Publication  
**EP 2455499 A4 20160210 (EN)**

Application  
**EP 10796868 A 20100617**

Priority  
• JP 2010004062 W 20100617  
• JP 2009162198 A 20090708

Abstract (en)  
[origin: EP2455499A1] Provided are a cold-rolled steel sheet which undergoes a small load at the time of cold-rolling, has excellent press formability and high strength, and a method of manufacturing the cold-rolled steel sheet. A hot-rolled steel sheet which has the composition consisting of, by mass%, 0.10 to 0.30 C, 0.2 or more Mn, 0.01 or more Ni, 0.5 to 2.5 Mn+Ni, 1.2 to 9.0 Cr, and Fe and unavoidable impurities as a balance and has a tensile strength of 1000 MPa or less is subjected to pickling and, thereafter, is subjected to cold rolling at a total rolling reduction of 60 % or more thus forming a cold-rolled steel sheet, and final continuous annealing treatment is performed at a soaking temperature of 750 °C or above and at a cooling rate of 3 °C/s to 100 °C/s so that the cold-rolled steel sheet which has a tensile strength of 1280 MPa or more, breaking elongation of 3 % or more and a thickness of 0.05 to 0.60 mm is manufactured.

IPC 8 full level  
**C21D 9/46** (2006.01); **C21D 1/26** (2006.01); **C21D 8/02** (2006.01); **C21D 9/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/50** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP US)  
**C21D 1/26** (2013.01 - EP US); **C21D 8/0236** (2013.01 - EP US); **C21D 9/0006** (2013.01 - EP US); **C21D 9/0037** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US)

Citation (search report)  
• [X] JP H08311601 A 19961126 - KOBE STEEL LTD  
• [X] JP 2005097725 A 20050414 - NIPPON STEEL CORP  
• [A] JP H101740 A 19980106 - KOBE STEEL LTD  
• See references of WO 2011004554A1

Designated contracting state (EPC)  
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