

Title (en)
Procedure for manufacturing of steel starting material by warm deforming

Title (de)
Verfahren zum Herstellen von Vormaterial aus Stahl durch Warmverformen

Title (fr)
Procédure de fabrication de la matière brute de l'acier par déformer à chaud

Publication
EP 1780293 B2 20171108 (DE)

Application
EP 06022284 A 20061025

Priority
DE 102005052069 A 20051028

Abstract (en)
[origin: EP1780293A2] Production of an initial material by thermal deformation involves subjecting a manganese-, chromium-, molybdenum-, nickel- and boron-containing steel (I), of specific composition, to controlled cooling from the thermal deformation temperature to give a martensitic-bainitic structure. Production of an initial material by thermal deformation involves subjecting a steel (I) to controlled cooling from the thermal deformation temperature to give a martensitic-bainitic structure. (I) contains (by weight, apart from iron and smelting impurities) 0.08-0.25% carbon, up to 1% silicon, 0.5-2.5% manganese, up to 0.035% phosphorus, up to 0.055% sulfur, 0.1-1.5% chromium, 0.1-0.5% molybdenum, 0.2-1.5% nickel, up to 0.06% aluminum, 0.0010-0.0060% boron, up to 0.040% titanium, up to 0.04% vanadium, up to 0.04% niobium, up to 0.5% copper and up to 0.010% nitrogen.

IPC 8 full level
C21D 1/00 (2006.01); **C21D 1/20** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01)

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Citation (opposition)
Opponent :

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