

Title (en)

METHOD FOR PRODUCING A HOT-ROLLED STEEL PRODUCT, AND A HOT-ROLLED STEEL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES HEISSGEWALZTEN STAHLPRODUKTS UND HEISSGEWALZTER STAHL

Title (fr)

PROCÉDÉ POUR LA PRODUCTION D'UN PRODUIT DE TYPE ACIER LAMINÉ À CHAUD ET ACIER LAMINÉ À CHAUD

Publication

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Application

EP 11743330 A 20110607

Priority

- FI 20100239 A 20100607
- IB 2011001436 W 20110607

Abstract (en)

[origin: WO2011154831A1] The invention relates to a method for producing a hot-rolled steel from a steel, whose composition as percentages by weight is C 0.075 - 0.12% Si 0.1 - 0.8% Mn 0.8 - 1.7% Al 0.015 - 0.08% P less than 0.012% s less than 0.005% Cr 0.2 - 1.3% Mo 0.15 - 0.80% Ti 0.01 - 0.05% B 0.0005 - 0.003% V 0.02 - 0.10% Nb less than 0.3% Ni less than 1% Cu less than 0.5% the rest being iron and unavoidable impurities. The invention relates in particular to direct quenched martensitic sheet-like steels, on which temper annealing is conducted, i.e. tempering steels and their production. The hot-rolled steel according to the invention is exceptionally temper-resistant after the direct quenching process, wherein by tempering it is made further high-strength (Rp0.2=890MPa) combined at the same time with good impact toughness (Charpy V (-20°C) =37J/cm2) and flangeability as well as good weldability.

IPC 8 full level

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CPC (source: EP FI)

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Citation (examination)

- GRANGE R A ET AL: "Hardness of Tempered Martensite in Carbon and Low-Alloy Steels", METALLURGICAL TRANSACTIONS, METALLURGICAL SOCIETY OF AIME. NEW YORK, US, vol. 8A, 1 November 1977 (1977-11-01), pages 1775 - 1785, XP003030859
- S. S. HANSEN, K. A. TAYLOR: "EFFECTS OF VANADIUM AND PROCESSING PARAMETERS ON THE STRUCTURES AND PROPERTIES OF A DIRECT-QUENCHED LOW-CARBON MO-B STEEL", METALLURGICAL TRANSACTIONS A OCTOBER 1991, VOLUME 22,, vol. 22, no. 10, 1 October 1991 (1991-10-01), pages 2359 - 2374

Citation (opposition)

Opponent : ArcelorMittal

- US 8728257 B2 20140520 - OI KENJI [JP], et al
- KR 920024972 A
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