

Title (en)
FLAT STEEL PRODUCT AND METHODE FOR PRODUCTION OF SAID PRODUCT

Title (de)
STAHLFLACHPRODUKT UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
PRODUIT EN ACIER PLAT ET PROCÉDÉ DE FABRICATION DECELLE-CI

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Application
EP 16723293 A 20160504

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Abstract (en)
[origin: WO2016177420A1] The invention relates to a flat steel product, having a tensile strength $R_m \geq 950$ MPa, a yield strength ≥ 800 MPa and an elongation at break $A_{50} \geq 8\%$. According to the invention, the flat steel product consists of steel which contains (in weight-%) 0.05 - 0.20% C, 0.2 - 1.5% Si, 0.01 - 1.5% Al, 1.0 - 3.0% Mn, $\leq 0.02\%$ P, $\leq 0.005\%$ S, $\leq 0.008\%$ N, and in each case optionally 0.05 - 1.0%, 0.05 - 0.2% Mo, 0.005 - 0.2% Ti, 0.001 - 0.05% Nb, 0.0001 - 0.005% B, the remainder being Fe and inevitable impurities, wherein: $1.5 \leq \psi \leq 3$, with $\psi = (\%C + \%Mn/5 + \%Cr/6) / (\%Al + \%Si)$ and %C, %Mn, %Cr, %Al, %Si being the respective C, Mn, Cr, Al or Si content of the steel. At the same time the flat steel product has a structure which consists of (in area percentage) $\leq 5\%$ bainite, $\leq 5\%$ polygonal ferrite, $\geq 90\%$ martensite and $\leq 2\%$ by volume residual austenite, at least half of the martensite being tempered martensite. The invention also relates to a method for producing such a flat steel product.

IPC 8 full level
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