

Title (en)
HOT-ROLLED STEEL SHEET AND ASSOCIATED MANUFACTURING METHOD

Title (de)
HEISSGEWALZTES STAHLBLECH UND ZUGEHÖRIGES HERSTELLUNGSVERFAHREN

Title (fr)
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Application
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Abstract (en)
[origin: WO2016005780A1] The invention mainly relates to a sheet of hot-rolled steel having an elastic limit higher than 680 MPa at least in the direction across the rolling direction, and no higher than 840 MPa, with a strength of 780 MPa and 950 MPa, an elongation at break higher than 10% and hole expansion ratio (Ac) no lower than 45%, in which the chemical composition includes, the contents being given as weight percentages: 0.04% < C < 0.08%, 1.2% < Mn < 1.9%, 0.1% < Si < 0.3%, 0.07% < Ti < 0.125%, 0.05% < Mo < 0.25%, 0.16% < Cr < 0.55% when 0.05% < Mo < 0.11% or 0.10% < Cr < 0.55% when 0.11 % < Mo < 0.25%, Nb < 0.045%, 0.005% ≤ Al < 0.1 %, 0.002% < N < 0.01 %, S < 0.004%, P < 0.020%, the remainder consisting of iron and inevitable impurities from the production process, in which the microstructure consists of granular bainite with a surface percentage higher than 70%, and ferrite with a surface percentage lower than 20%, the possible complement consisting of lower bainite, martensite and residual austenite, the sum of the contents of martensite and residual austenite being lower than 5%. The invention also relates to the method for manufacturing such a sheet.

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