

Title (en)
HIGH-STRENGTH STEEL SHEET AND PRODUCTION METHOD THEREFOR

Title (de)
HOCHFESTES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TÔLE D'ACIER À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE PRODUCTION

Publication
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Application
EP 15786615 A 20150422

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Abstract (en)
[origin: EP3138936A1] The invention provides high-strength steel sheets having good formability (workability) and strength and methods for manufacturing such steel sheets. The high-strength steel sheet has a chemical composition including, in mass%, C: 0.010% to 0.080%, Si: 0.05% or less, Mn: 0.10% to 0.70%, P: 0.03% or less, S: 0.020% or less, Al: 0.005% to 0.070% and N: 0.0120% to 0.0180%, the balance being Fe and inevitable impurities, nitrogen present as solute nitrogen having a content of 0.0100% or more in the N content, the average ferrite grain size being 7.0 μm or less, the density of dislocations at a depth of 1/4 sheet thickness from the surface being $4.0 \times 10^{14} \text{ m}^{-2}$ to $2.0 \times 10^{15} \text{ m}^{-2}$, the tensile strength and the elongation in the transverse direction perpendicular to the rolling direction after aging treatment being 530 MPa or more and 7% or more.

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