

Title (en)  
HIGH-STRENGTH STEEL SHEET AND PROCESS FOR PRODUCING SAME

Title (de)  
HOCHFESTES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
FEUILLE D'ACIER À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 2796584 A1 20141029 (EN)**

Application  
**EP 12860717 A 20121129**

Priority  
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• JP 2012007663 W 20121129

Abstract (en)  
Provided are a high-strength steel sheet, excellent in formability, having a TS of 600 MPa to 700 MPa, an El of 25% or more, and a  $\alpha$  of 80% or more and a method for producing the same. A high-strength steel sheet has a composition containing 0.10% to 0.18% C, more than 0.5% to 1.5% Si, 0.5% to 1.5% Mn, 0.05% or less P, 0.005% or less S, and 0.05% or less Al on a mass basis, the remainder being Fe and inevitable impurities and also has a microstructure containing ferrite and pearlite. The volume fraction of the ferrite is 70% to 97%. The volume fraction of the pearlite is 3% or more. The volume fraction of cementite present at grain boundaries of the ferrite is 2% or less. The sum of the volume fractions of phases other than the ferrite, the pearlite, and the cementite is less than 3%. The average grain size of the ferrite is 7  $\mu$ m or less.

IPC 8 full level  
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