

Title (en)  
HIGH-STRENGTH STEEL PLATE HAVING EXCELLENT LOW-TEMPERATURE FRACTURE TOUGHNESS AND ELONGATION RATIO, AND MANUFACTURING METHOD THEREFOR

Title (de)  
HOCHFESTE STAHLPLATTE MIT AUSGEZEICHNETER TIEFTEMPERATURBRUCHZÄHIGKEIT UND STRECKVERHÄLTNIS UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
PLAQUE D'ACIER À HAUTE RÉSISTANCE AYANT UN EXCELLENT RAPPORT DE TÉNACITÉ À LA RUPTURE ET D'ALLONGEMENT À BASSE TEMPÉRATURE ET PROCÉDÉ DE FABRICATION ASSOCIÉ

Publication  
**EP 3889305 A4 20211006 (EN)**

Application  
**EP 19889727 A 20191129**

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Abstract (en)  
[origin: EP3889305A1] A high-strength steel plate having excellent fracture toughness and elongation ratio according an aspect of the present invention comprises, by weight%, 0.05-0.1% of carbon (C), 0.05-0.5% of silicon (Si), 1.4-2.0% of manganese (Mn), 0.01-0.05% of aluminum (Al), 0.005-0.02% of titanium (Ti), 0.002-0.01% of nitrogen (N), 0.04-0.07% of niobium (Nb), 0.05-0.3% of chromium (Cr), 0.05-0.4% of nickel (Ni), 0.02% or less of phosphorus (P), 0.005% or less of sulfur (S), 0.0005-0.004% of calcium (Ca), and the remainder of iron (Fe) and unavoidable impurities, wherein a microstructure includes 20-60 area% of ferrite and bainite, and the grain size of the upper 80% of the high-angle grain sizes based on 15 degrees in the centre of the steel plate may be 70 µm or less.

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Citation (search report)  
• [XII] KR 20140083540 A 20140704 - POSCO [KR]  
• [A] WO 2009072753 A1 20090611 - POSCO [KR], et al  
• [A] KR 20120073408 A 20120705 - POSCO [KR]  
• [AD] KR 20130073472 A 20130703 - POSCO [KR]  
• See also references of WO 2020111891A1

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