Title (en)

THICK STEEL SHEET HAVING EXCELLENT WELDING HEAT-AFFECTED ZONE TOUGHNESS

Title (de)

DICKES STAHLBLECH MIT HERVORRAGENDER ZÄHIGKEIT DER WÄRMEEINFLUSSZONE

Title (fr)

FEUILLE D'ACIER ÉPAISSE AYANT UNE EXCELLENTE TÉNACITÉ DANS LA ZONE AFFECTÉE THERMIQUEMENT PAR LE SOUDAGE

Publication

EP 2899289 B1 20180418 (EN)

Application

EP 13838421 A 20130829

Priority

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- JP 2013073223 W 20130829

Abstract (en)

[origin: EP2899289A1] A steel plate according to the present invention has a predetermined chemical composition and contains specific oxide particles. The oxide particles include constituent elements excluding oxygen in contents, in mass percent, meeting the conditions: 2% < Ti < 40%, 5% < A1 < 30%, 5% < Ca < 40%, 5% < REM < 50%, 2% < Zr < 30%, and 1.5 #¤ REM/Zr. Of the oxide particles, those with an equivalent circle diameter of less than 2 μm are present in a number density of 300 or more per square millimeter, and those with an equivalent circle diameter of 2 μm or more are present in a number density of 100 or less per square millimeter. Of titanium nitride particles, those with an equivalent circle diameter of 1 μm or more are present in a number density of 7 or less per square millimeter, and those with an equivalent circle diameter of 20 nm or more are present in a number density of 1.0x 10 6 or more per square millimeter. The steel plate meets a condition specified by the relational expression: |da-df|/da #¤ 0.35.

IPC 8 full level

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CPC (source: EP KR)

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