

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
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Application
EP 13838421 A 20130829

Priority
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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% < Al < 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 10⁶ 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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