Title (en)

THICK HIGH STRENGTH STEEL PLATE HAVING EXCELLENT LOW TEMPERATURE TOUGHNESS IN WELDING HEAT AFFECTED ZONE CAUSED BY HIGH HEAT INPUT WELDING

Title (de)

DICKE HOCHFESTE STAHLPLATTE MIT HERVORRAGENDER KÄLTEZÄHIGKEIT IN EINER DURCH DIE SCHWEISSWÄRME BEEINFLUSSTEN ZONE INFOLGE VON SCHWEISSEN MIT HOHEM WÄRMEEINTRAG

Title (fr)

PLAQUE D'ACIER ÉPAISSE TRÈS RÉSISTANTE D"EXCELLENTE RÉSISTANCE À BASSE TEMPÉRATURE DANS LA ZONE AFFECTÉE PAR LA TEMPÉRATURE DE SOUDAGE DU FAIT DU SOUDAGE A HAUTE TEMPÉRATURE

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Application

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Abstract (en)

The present invention provides a high-strength thick steel plate having a plate thickness of 50 to 80 mm and a tensile strength of 490 to 570 MPa which is able to realize an excellent HAZ toughness even when welding with a heat input of 20 to 100 kJ/mm is conducted and is characterized by containing, by wt%, 0.03-0.14% of C, 0.30% or less of Si, 0.8-2.0% of Mn, 0.02% or less of P, 0.005% or less of S, 0.8-4.0% of Ni, 0.003-0.040% of Nb, 0.001-0.040% of Al, 0.0010-0.0100% of N, and 0.005-0.030% of Ti, where Ni and Mn satisfy equation [1], and the balance of iron and unavoidable impurities: Ni / Mn #¥ 10 × Ceq - 3 0.36 < Ceq < 0.42 where, Ceq=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

IPC 8 full level

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