

Title (en)

THICK STEEL PLATE BEING EXCELLENT IN CTOD CHARACTERISTIC IN WELDING HEAT AFFECTED ZONE AND HAVING YIELD STRENGTH OF 460 Mpa OR MORE

Title (de)

DICKE STAHLPLATTE MIT HERVORRAGENDEN CTOD-EIGENSCHAFTEN DER DURCH SCHWEISSEN BEEINFLUSSTEN BEREICHE UND MIT EINER STRECKGRENZE VON 460 MPA ODER MEHR

Title (fr)

TOLE D'ACIER EPAISSE EXCELLENTE DU POINT DE VUE DE SES CARACTERISTIQUES CTOD DANS LA ZONE AFFECTEE PAR LA CHALEUR DU SOUDAGE ET DONT LA LIMITE CONVENTIONNELLE D'ELASTICITE EST SUPERIEURE OU EGALE A 460 MPA

Publication

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Application

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Abstract (en)

The object of the present invention is to provide a steel plate having a yield strength not lower than 460 MPa and CTOD in a HAZ not less than 0.2 mm at -10 DEG C. The present invention is a steel plate having an excellent CTOD property in a weld heat-affected zone and a yield strength not lower than 460 Mpa, characterized by: having a chemical composition comprising, in terms of wt%, C: 0.04 to 0.14 %, Si: 0.4 % or less, Mn: 1.0 to 2.0 %, P: 0.02 % or less, S: 0.001 to 0.005 %, Al: 0.001 to 0.01 %, Ti: 0.005 to 0.03 %, Nb: 0.005 to 0.05 %, Mg: 0.0003 to 0.005 %, O: 0.001 to 0.005 %, and N: 0.001 to 0.01 %; with the balance consisting of iron and unavoidable impurities: and having TiN particles of 0.01 to 0.5  $\mu$ m at not less than 10,000 pieces/mm<sup>2</sup> containing oxide composed of Mg and Al, and particles of 0.5 to 10  $\mu$ m at not less than 10 pieces/mm<sup>2</sup> containing not less than 0.3 wt% of Mn in the compounded form of oxide and sulfide. <IMAGE>

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Cited by

EP2385149A4; EP1681362A4; EP2218800A4; EP3447162A4; EP2594657A4; EP2644733A4; EP1736562A4; EP1726675A3; US8361248B2; US8668784B2; US8920713B2; US9403242B2; US8182740B2; US8192683B2; US10500817B2

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