

Title (en)

STEEL MATERIAL HAVING SUPERIOR TOUGHNESS AT WELDING HEAT AFFECTED ZONE

Title (de)

STAHLMATERIAL MIT HERVORRAGENDER ZÄHIGKEIT BEIM SCHWEISSEN EINER WÄRMEEINFLUSSZONE

Title (fr)

MATÉRIAU ACIER PRÉSENTANT UNE RÉSISTANCE SUPÉRIEURE DANS UNE ZONE AFFECTÉE PAR LA CHALEUR DE SOUDAGE

Publication

EP 2977479 B1 20180425 (EN)

Application

EP 14767775 A 20140317

Priority

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Abstract (en)

[origin: EP2977479A1] In this steel material satisfying a predetermined chemical composition and having a remainder comprising iron and unavoidable impurities, a complex oxide is contained containing REM, Zr, Ti, Al, Ca, and S, the complex oxide has no greater than 5.0/mm² of oxides having a circular-equivalent diameter of greater than 3 μm, and with respect to complex oxides having a circular-equivalent diameter of 0.1-3 μm, there are at least 100/mm² of complex oxides satisfying formula (1), and furthermore the average composition of the complex oxides that are 0.1-3 μm satisfying formula (1) is such that there is no greater than 20% of Al₂O₃, 3-20% of TiO₂, 5-50% of ZrO₂, 5-50% of REM oxide, 5-50% of CaO, and 1-15% of S. (where d is the circular-equivalent diameter of each complex oxide, and is 0.1-3 μm).

IPC 8 full level

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