

Title (en)
STEEL PLATE WITH EXCELLENT SOUR RESISTANCE, HAZ TOUGHNESS AND HAZ HARDNESS, AND STEEP PIPE FOR LINE PIPE

Title (de)
STAHLPLATTE MIT AUSGEZEICHNETER SÄUREBESTÄNDIGKEIT, ZÄHIGKEIT GEGENÜBER WÄRMEEINFLUSSZONE, FESTIGKEIT GEGENÜBER WÄRMEEINFLUSSZONE UND STAHLROHR FÜR EIN LEITUNGSROHR

Title (fr)
PLAQUE D'ACIER DOTÉE D'UNE EXCELLENTE RÉSISTANCE À L'ACIDITÉ, D'UNE EXCELLENTE TÉNACITÉ HAZ ET D'UNE EXCELLENTE DURETÉ HAZ ET TUYAU EN ACIER POUR TUYAU DE CANALISATION

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Application
EP 14870221 A 20141210

Priority

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Abstract (en)
[origin: US2016244865A1] The present invention relates to a steel plate with excellent sour resistance, HAZ toughness and HAZ hardness, including, in terms of mass %, C: 0.02-0.20%, Si: 0.02-0.50%, Mn: 0.6-2.0%, P: over 0% and 0.030% or less, S: over 0% and 0.004% or less, Al: 0.010-0.08%, N: 0.001-0.01%, Nb: 0.002% or more and less than 0.05%, O: over 0% and 0.0040% or less, REM: 0.0002-0.05%, and Zr: 0.0003-0.020% with the remainder consisting of iron and inevitable impurities, in which an expression $10,000 \times [\text{Nb}] + 31 \times \text{Di} - 82\#0$ (where $\text{Di} = ([\text{C}]/10)0.5 \times (1 + 0.7 \times [\text{Si}]) \times (1 + 3.33 \times [\text{Mn}]) \times (1 + 0.35 \times [\text{Cu}]) \times (1 + 0.36 \times [\text{Ni}]) \times (1 + 2.16 \times [\text{Cr}]) \times (1 + 3 \times [\text{Mo}]) \times (1 + 1.75 \times [\text{V}]) \times 1.115$) is satisfied, and, in the composition of inclusions with 1 μm or more width contained in steel, Zr amount is 1-40%, REM amount is 5-50%, Al amount is 3-30%, and S amount is over 0% and less than 20%.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/02** (2006.01); **C21D 9/14** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/58** (2006.01)

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Citation (search report)

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- See references of WO 2015087940A1

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