

Title (en)
STEEL PLATE WITH EXCELLENT HYDROGEN-INDUCED CRACKING RESISTANCE AND TOUGHNESS, AND STEEL PIPE FOR LINE PIPE

Title (de)
STAHLPLATTE MIT AUSGEZEICHNETER BESTÄNDIGKEIT GEGENÜBER WASSERSTOFFINDUZIERTER RISSBILDUNG UND ZÄHIGKEIT
SOWIE STAHLROHR FÜR LEITUNGSROHR

Title (fr)
PLAQUE D'ACIER PRÉSENTANT D'EXCELLENTE DURETÉ ET RÉSISTANCE AUX CRAQUELURES PROVOQUÉES PAR L'HYDROGÈNE ET
TUYAU D'ACIER POUR TUYAU DE CANALISATION

Publication
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Application
EP 18189539 A 20140625

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• EP 14819986 A 20140625
• JP 2014066852 W 20140625

Abstract (en)
The present invention provides a steel plate having demonstrably excellent hydrogen-induced cracking resistance and toughness. The steel plate is characterized in including, in percent by mass, 0.02-0.15% of C, 0.02-0.50% of Si, 0.6-2.0% of Mn, more than 0% and up to 0.030% of P, more than 0% and up to 0.003% of S, 0.010-0.08% of Al, 0.0003-0.0060% of Ca, 0.001-0.01% of N, and more than 0% and no more than 0.0045% of O, the balance comprising iron and unavoidable impurities; the mass ratio of Ca to S (Ca/S) being at least 2.0; the amounts of Ca, S, and O satisfying the equation $(Ca - 1.25 S)/O \geq 1.80$; and the Ar gas content of the steel being no greater than $0.5 \mu\text{L}/\text{cm}^3$.

IPC 8 full level
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Citation (applicant)
• JP 2010209461 A 20100924 - NIPPON STEEL CORP
• JP H06136440 A 19940517 - NIPPON STEEL CORP
• CAMP-ISIJ, vol. 24, 2011, pages 671

Citation (search report)
• [A] JP H08283826 A 19961029 - SUMITOMO METAL IND
• [A] CN 102732666 A 20121017 - SHOUGANG CORP
• [A] JP H07216500 A 19950815 - SUMITOMO METAL IND
• [A] JP 2914138 B2 19990628

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