

Title (en)
MARTENSITIC STAINLESS-STEEL SEAMLESS PIPE FOR OIL WELL PIPE AND PROCESS FOR PRODUCING THE SAME

Title (de)
NAHTLOSES ROHR AUS MARTENSITISCHEM NICHTTROTENDEM STAHL FÜR ÖLBOHRUNGSROHR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TUYAU SANS SOUDURE EN ACIER INOXYDABLE MARTENSITIQUE POUR TUYAU DE Puits DE PÉTROLE ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 2172573 A4 20110518 (EN)

Application
EP 07829943 A 20071010

Priority

- JP 2007070209 W 20071010
- JP 2007172560 A 20070629

Abstract (en)
[origin: EP2172573A1] A seamless steel pipe for oil country tubular goods which simultaneously has a high strength of a 110 ksi grade of yield strength and a superior low temperature toughness and a method for manufacturing the same are provided. A quenching treatment is performed on a stainless steel seamless pipe having a composition which contains on a mass percent basis, less than 0.010% of C, 1.0% or less of Si, 0.1% to 2.0% of Mn, 0.020% or less of P, 0.010% or less of S, 0.10% or less of Al, 10% to 14% of Cr, 0.1% to 4.0% of Ni, 0.05% or less of N, and the balance being Fe and inevitable impurities in which after heating is performed to a heating temperature for quenching equivalent to or more than the Ac 3 transformation point, cooling is performed to a temperature range of 100 °C or less at a cooling rate equivalent to or more than that of air cooling; and following the quenching treatment, a tempering treatment is performed in which heating is performed to a tempering temperature in the range of more than 450 °C to 550 °C, and cooling is then performed. As a result, a martensitic stainless steel seamless pipe for oil country tubular goods is obtained which simultaneously has a high strength of a 110 ksi grade of yield strength and a superior low temperature toughness having a vTrs of -60 °C or less. In addition to the above composition, at least one selected from the group consisting of Cu, Mo, V, Nb, and Ti may also be contained.

IPC 8 full level
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Citation (search report)

- [X] JP H0641638 A 19940215 - NIPPON STEEL CORP
- [X] JP H05263138 A 19931012
- [X] JP H08120345 A 19960514 - NIPPON STEEL CORP
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- [A] JP H0688130 A 19940329 - NIPPON STEEL CORP
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- [A] JP H06100935 A 19940412 - NIPPON STEEL CORP
- [A] JP 2001152249 A 20010605 - NIPPON KOKAN KK
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- [A] EP 1584699 A1 20051012 - SUMITOMO METAL IND [JP]
- See references of WO 2009004741A1

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