

Title (en)

HIGH-STRENGTH STAINLESS STEEL SEAMLESS PIPE FOR OIL WELLS

Title (de)

NAHTLOSES ROHR AUS HOCHFESTEM ROSTFREIEM STAHL FÜR ÖLBOHRLÖCHER

Title (fr)

TUYAU SANS SOUDURE EN ACIER INOXYDABLE À HAUTE RÉSISTANCE POUR PUITS DE PÉTROLE

Publication

EP 4043591 A1 20220817 (EN)

Application

EP 20904807 A 20201120

Priority

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- JP 2020043310 W 20201120

Abstract (en)

To provide a high-strength seamless stainless steel pipe for oil well that has high strength, is excellent in hot workability, has excellent carbon dioxide gas corrosion resistance, and is excellent in SSC resistance under a low temperature environment. A high-strength seamless stainless steel pipe for oil well having a composition containing the particular components, the balance being Fe and unavoidable impurities, and satisfying the following expression (1) and the following expression (2), having a number density of an inclusion having a major axis of 5 μm or more and $0.5 < \text{Ti}/(\text{Ti}+\text{Al}+\text{Mg}+\text{Ca}) < 1.0$ of 0.5 per $\text{mm}^{<\sup>2</sup>}$ or more and 3 per $\text{mm}^{<\sup>2</sup>}$ or less, and having a yield strength of 655 MPa or more, wherein in $0.5 < \text{Ti}/(\text{Ti}+\text{Al}+\text{Mg}+\text{Ca}) < 1.0$, Ti, Al, Mg, and Ca represent the contents (% by mass) of the elements in the inclusion, and an element that is not contained is designated as 0, $\text{Cr}+0.65\text{Ni}+0.6\text{Mo}+0.55\text{Cu}-20\text{C} \geq 15.0$ (1) $\text{Cr}+\text{Mo}+0.3\text{Si}-43.3\text{C}-0.4\text{Mn}-\text{Ni}-0.3\text{Cu}-9\text{N} \leq 11.0$ (2) wherein Cr, Ni, Mo, Cu, C, Si, Mn, and N represent the contents (% by mass) of the elements, and an element that is not contained is designated as 0.

IPC 8 full level

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CPC (source: EP US)

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