

Title (en)

METHOD FOR PRODUCING HIGH-STRENGTH SEAMLESS CR-NI ALLOY PIPE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES HOCHFESTEN NAHTLOSEN ROHRS AUS EINER CR-NI-LEGIERUNG

Title (fr)

PROCÉDÉ DE FABRICATION D'UNE CONDUITE EN ALLIAGE DE CR-NI SANS SOUDURE À RÉSISTANCE ÉLEVÉE

Publication

EP 2415883 A1 20120208 (EN)

Application

EP 10758614 A 20100329

Priority

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- JP 2009088737 A 20090401

Abstract (en)

A method for producing a high-strength Cr-Ni alloy seamless pipe, excellent in hot workability and stress corrosion cracking resistance, without causing the lamination during piercing-rolling, comprising: preparing an alloy billet that has a chemical composition comprising, by mass%, of C: 0.05% or less, Si: 1.0% or less, Mn: less than 3.0%, P: 0.005% or less, S: 0.005% or less, Cu: 0.01 to 4.0%, Ni: 25% or more and less than 35%, Cr: 20 to 30%, Mo: 0.01% or more and less than 4.0%, N: 0.10 to 0.30%, Al: 0.03 to 0.30%, O (oxygen): 0.01% or less, REM (rare earth metal): 0.01 to 0.20%, and the balance being Fe and impurities, and satisfying the following formula (1); hot working to make a seamless material pipe on the basis of a cross roll piercing process; subjecting a solution treatment; and cold working. $N \times P / REM \neq 0.10$ wherein P, N and REM in formula (1) represent the contents (mass%) of P, N and REM, respectively. The Cr-Ni alloy may further contain one or more of W, Ti, Nb, Zr, V, Ca and Mg.

IPC 8 full level

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CPC (source: EP US)

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Cited by

EP4043590A4; EP3913103A1; CN113718134A; EP3202930A1; RU2731227C2; WO2017134184A1; US10774411B2

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