

Title (en)
METHOD FOR PRODUCING AUSTENITIC STAINLESS STEEL

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES AUSTENITISCHEN EDELSTAHL

Title (fr)
PROCÉDÉ DE PRODUCTION D'ACIER INOXYDABLE AUSTÉNITIQUE

Publication
EP 2737961 A1 20140604 (EN)

Application
EP 12819669 A 20120726

Priority

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Abstract (en)

It is possible to securely produce high Si-containing austenitic stainless steel having corrosion resistance usable in a highly-concentrated nitric acid environment at a high temperature without generating scabs by heating and hot-rolling a slab of stainless steel at a heating temperature during the hot rolling, and subsequently, carrying out heat treatment to heat the hot-rolled stainless steel at a temperature of 1100 to 1160°C, and thereafter, to cool this stainless steel at cooling rate of at least 100°C/min. , wherein the slab of stainless steel has a chemical composition containing: C: at most 0.04% ; Cr: 7 to 20%, Ni: 10 to 22%, Si: 2.5 to 7%, Mn: at most 10% , sol. Al: at most 0.03% , P: at most 0.03% , S: at most 0.03% ; N: at most 0.035% , a total amount of one or more types of elements selected from Nb, Ti, Ta, and Zr: 0.05 to 0.7%; and the remainder being Fe and impurities, and the heating temperature during the hot rolling is defined as T_h in which #T of Formula (1): T_h = 1135 - 90Si - 2.9Cr + 40Ni - #T is at least 30°C.

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