

Title (en)

AUSTENITIC STAINLESS STEEL AND PROCESS FOR HYDROGENATION OF SAME

Title (de)

AUSTENITISCHER EDELSTAHL UND VERFAHREN ZU SEINER HYDROGENIERUNG

Title (fr)

ACIER INOXYDABLE AUSTÉNITIQUE ET PROCÉDÉ POUR SON HYDROGÉNATION

Publication

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Application

EP 09804865 A 20090717

Priority

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Abstract (en)

Disclosed are an austenitic stainless steel, and a hydrogenation method thereof, in which occurrence of fatigue cracks and growth of fatigue cracks are suppressed by charging the austenitic stainless steel with hydrogen. In particular, focusing on the amount of diffusible hydrogen and non-diffusible hydrogen, which cause hydrogen embrittlement in austenitic stainless steel, the fatigue strength characteristics of austenitic stainless steel are improved by bringing the amount of diffusible hydrogen and non-diffusible hydrogen contained in the austenitic stainless steel to 0.0030 wt% (30 wt ppm) or higher. The austenitic stainless steel is subjected to a thermal treatment at a heating temperature of 200 to 500°C for up to 460 hours in a hydrogen environment. The hydrogen (H) contained in the austenitic stainless steel is brought thereby to 0.0030 wt% (30 wt ppm) or higher.

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

See references of WO 2010016378A1

Cited by

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