

Title (en)

Hydrogen diffusion barrier on steel by means of a pulsed-plasma ion-nitriding process

Title (de)

Wasserstoffdiffusionssperre für Stahl mittels Ionennitrierungsverfahren mit gepulstem Plasma

Title (fr)

Établissement d'une barrière de diffusion de l'hydrogène sur l'acier au moyen d'un procédé de nitruration ionique à plasma pulsé

Publication

EP 2351869 A1 20110803 (EN)

Application

EP 10186027 A 20031119

Priority

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- BR 02054191 A 20021220

Abstract (en)

Patente of invention for "Hydrogen Diffusion Barrier on Steel by Means of a Pulsed-Plasma Ion-Nitriding Process". The present invention refers to a pulsed-plasma ion-nitriding process performed with the objective of creating hydrogen diffusion barrier on steel, herein exemplified by using the API 5L X-65 steel; high-strength low-alloy steel. The pulsed-plasma ion-nitriding consisted to drive ions and active species of atomic and molecular nitrogen to the material's surface by applying a difference of potential between two electrodes, periodically interrupted with a pre-determined frequency, such that the cathode (1) is the own material or piece to be treated, in a chamber (2) that was previously vacuum pumped (4) and then filled up (6) with the gas nitrogen or a gaseous mixture containing this gas.

IPC 8 full level

C23C 8/36 (2006.01); **C23C 8/38** (2006.01)

CPC (source: EP)

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Citation (search report)

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