Title (en)

METHOD OF IONITRIDING A STEEL ARTICLE WHICH HAS BEEN PLASTICALLY DEFORMED IN ADVANCE

Publication

EP 0067098 B1 19851030 (FR)

Application

EP 82400928 A 19820519

Priority

FR 8110129 A 19810521

Abstract (en)

[origin: EP0067098A1] 1. A method for the ionic nitriding of pieces of steel of any type, which comprises the following four stages in succession : a) a prior cold-working operation on the piece, the final degree of cold-working of which is between 10% and 40% ; b) a first ionic nitriding sequence with a duration of between one hour and 10 hours, carried out at a temperature t1 of between 450 degrees and 520 degrees, in a gaseous mixture consisting of nitrogen and hydrogen, which is such that the nitrogen partial pressure p1 is between 10 and 35 Pascal and such that the total gas pressure is between 200 and 650 Pascal ; c) a second ionic nitriding sequence the duration of which is between 40 and 70 hours, carried out at a temperature t2 of between 500 degrees and 580 degrees C and at least 10 degrees C and at most 50 degrees C above t1 in a gaseous mixture consisting of nitrogen and hydrogen, which is such that the nitrogen partial pressure p2 is between 60 and 80 Pascal, and that the total gas pressure remains between 200 and 650 Pascal ; and d) a final cooling in vacuo.

IPC 1-7

C23C 16/36

IPC 8 full level

C23C 8/02 (2006.01); **C23C 8/38** (2006.01); **C23C 16/36** (2006.01)

CPC (source: EP)

C23C 8/02 (2013.01); **C23C 8/38** (2013.01)

Cited by

GB2193732A; US5658394A; CN105695922A; US8479396B2; WO2007137557A3; WO2016020384A1

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