

Title (en)  
METHOD OF PRODUCING A HARD LAYER ON ARTICLES OF TI OR TI-ALLOYS

Publication  
**EP 0105835 B1 19871223 (DE)**

Application  
**EP 83810395 A 19830831**

Priority  
CH 531382 A 19820907

Abstract (en)  
[origin: US4511411A] A component of titanium or alloys thereof is placed in an autoclave. Nitrogen gas or ammonia is pumped into the autoclave. The chemically untreated component is exposed in the autoclave for three hours to a pressure of 900 bar and a temperature of 1000 DEG C. The TiN layer thus formed in the surface- and subsurface-zone of the component has a Vickers hardness of 800 0.05 g/sq.mm. with a thickness of 20 microns. With this economical method, an increase in surface hardness from Vickers hardness 0.05=450 with prior art methods to Vickers hardness 0.05=800 is achieved.

IPC 1-7  
**C23C 8/24**

IPC 8 full level  
**C23C 8/24** (2006.01); **C23C 16/34** (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP US)  
**C23C 8/24** (2013.01 - EP US); **C23C 28/044** (2013.01 - EP US); **C23C 28/048** (2013.01 - EP US)

Cited by  
US5211768A; DE4332912C1; DE4021286C1; US5265137A; US5292555A; CN109154040A; EP0545069A1; DE4208848A1; DE4208848C2; EP0544987A1; DE4139975A1; DE4139975C2; WO9209716A1; US6231956B1; EP0464265B1; WO9811272A1

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