

Title (en)  
POWDER-METALLURGICALLY PRODUCED, WEAR-RESISTANT MATERIAL

Title (de)  
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Title (fr)  
MATERIAU RESISTANT A L'USURE ET PRODUIT PAR METALLURGIE DES POUDRES

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Application  
**EP 06742765 A 20060502**

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Abstract (en)  
[origin: WO2006117030A1] The invention relates to a wear-resistant material comprising an alloy that contains: 1.5 to 5.5 wt. % of carbon; 0.1 to 2.0 wt. % of silicon; a maximum of 2.0 wt. % of manganese; 3.5 to 30.0 wt. % of chromium; 0.3 to 10 wt. % of molybdenum; 0 to 10 wt. % of tungsten; 0.1 to 30 wt. % of vanadium; 0 to 12 wt. % of niobium; 0 to 12 wt. % of titanium; 1.0 to 6.0 wt. % of nickel, the rest being composed of iron and production-related impurities. The carbon moiety meets the following condition:  $C_{\text{alloy}} [w\%] = S1 + S2 + S3$ , wherein  $S1 = (Nb + Ta + 2(Ti + V \cdot 0.9))/a$ ,  $S2 = (Mo + W/2 + Cr \cdot b)/5$ ,  $S3 = c + (T_{\text{H}} - 900) \cdot 0.0025$ , wherein  $7 < a < 9$ ,  $6 < b < 8$ ,  $0.3 < c < 0.5$ , and  $900^\circ\text{C} < T_{\text{H}} < 1220^\circ\text{C}$ . The invention also relates to a method for producing said wear-resistant material and uses of the materials.

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