Title (en)

POWDER-METALLURGICALLY PRODUCED, WEAR-RESISTANT MATERIAL

Title (de)

PULVERMETALLURGISCH HERGESTELLTER, VERSCHLEISSBESTÄNDIGER WERKSTOFF

Title (fr)

MATERIAU RESISTANT A L'USURE ET PRODUIT PAR METALLURGIE DES POUDRES

Publication

EP 1882050 B1 20160413 (DE)

Application

EP 06742765 A 20060502

Priority

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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_{alloy} [w %] = S1 + S2 + S3, wherein S1 = (Nb + Ta + 2(Ti + V 0.9))/a, S2 = (Mo + W/2 + Cr - b)/5, S3 = c + (T_H - 900) 0.0025, wherein 7 < a < 9, 6 < b < 8, 0.3 < c < 0.5, and 900 °C < T_H < 1220 °C. The invention also relates to a method for producing said wear-resistant material and uses of the materials.

IPC 8 full level

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