

Title (en)

HIGH SPEED STEEL PREPARED BY POWDER METALLURGY, WEAR-RESISTANT PART PREPARED THEREBY AND PROCESS FOR ITS MANUFACTURE

Publication

EP 0322397 B1 19920122 (DE)

Application

EP 88890293 A 19881122

Priority

AT 340187 A 19871223

Abstract (en)

[origin: US5021085A] The invention relates to high speed tool steels produced by powder metallurgy; to parts subject to heavy wear which are fabricated from such steel; and to a method of such fabrication. According to the invention, the part subject to heavy wear contains Nb in the amount of 2-15 wt. % and V in the amount of 1-4 wt. %, and further contains metal carbides in the amount of 10-30 vol. %; and that the lower limit of the carbon content is given by the formula $C_{min}=0.45+0.1(\%Nb)+0.20(\%V)$, and the upper limit of the carbon content is given by the formula $C_{max}=1.0+0.15(\%Nb)+0.24(\%V)$. In manufacturing the steel the melt of the alloying components is subjected to atomization in an overheated state (substantially above the liquidus temperature), to produce a powder.

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IPC 8 full level

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CPC (source: EP US)

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