

V. S. Antonyuk, B. A. Lyashenko, E. B. Soroka, A. V. Rutkovskiy. Tools, Powders, Pastes On The Reduction Of Residual Stresses In Vacuum-Plasma-Sprayed Discrete-Structured Coatings. - Journal of Superhard Materials, Vol. 27, No. 2, pp. 68-71, 2005

The paper discusses residual stresses in vacuum-plasma-sprayed titanium nitride coatings. It is shown that replacing of continuous coatings with discrete-structured ones reduces residual stresses in them. A decrease in residual stresses depends on the size of a discrete segment: the smaller the segment, the greater this dependence. The approach proposed makes it possible to limit residual stresses in a coating while maintaining its continuity, and to reduce the probability of its contact fracture.

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