

**THE PECULIARITIES OF STRUCTURAL MODIFICATIONS
OF CVD POLYCRYSTALLINE DIAMOND COATINGS BY HEAVY DOPING
WITH BORON**

VITALY OKHOTNIKOV, STEPAN LINNIK AND ALEXANDER GAYDAYCHUK

*Tomsk Polytechnic University, Russia
vohotnikov@yandex.ru*

We report about the features of structural modifications of CVD polycrystalline diamond coatings by heavy doping with boron. This coatings were deposited in abnormal glow discharge plasma with the addition of a dopant (boron) in different concentrations. Coatings with different structure and phase composition from lightly to heavy doped were obtained. Raman spectroscopy, X-ray diffractometry Hall's method, four-point probe method and SEM were used for identification of obtained composition and microstructure of deposited films.

Keywords: *CVD diamond coatings, Glow discharge plasma, Doping, Structure, Modification.*