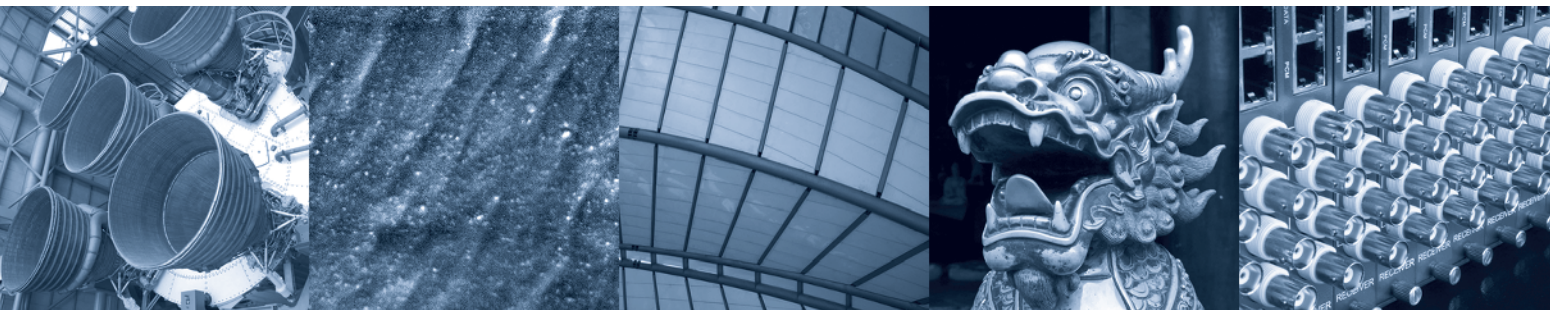




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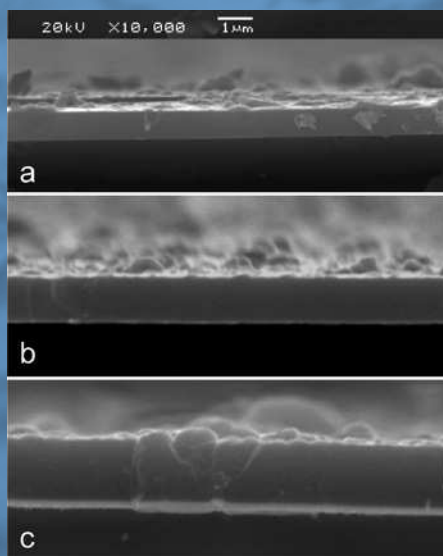
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Handing over to P.T. Readers the next volume of Archives of Materials Science and Engineering at the same time I would like to inform that we publish in it as usual a few next scientific papers. Encouraging P.T. Authors to submit these papers for the publication, today I recommend reading these research papers. I hope that the reading of this issue will bring you satisfaction.



Authors: M. Pancielejko, A. Czyżniewski, V. Zavaleyev, A. Pander and K. Wojtalik in the paper entitled "Optimization of the deposition parameters of DLC coatings with the MCVA method" on a page 60 study was to determine the optimal values of selected deposition parameters of diamond-like-carbon coatings (DLC) with the modified cathodic vacuum arc (MCVA) method which ensure obtaining their most advantageous properties from the perspective of their application for the coating on high-speed steel tool substrates for woodworking. It was established on the basis of the statistical analysis of the research results that in order to ensure a high adhesion of DLC coatings to high-speed steel substrates, a thick Cr sublayer (0.3 μm) and a DLC coating (1.8 μm) is to be used, which is deposited at a high argon pressure (0.25 Pa); no substrate bias (the floating potential) is to be used. In order to obtain high hardness and friction wear resistance, higher values of substrate bias voltages (-80 V) and a low pressure of argon (0.01 Pa) are to be used. From results of the optimization of selected deposition parameters of DLC on the Taguchi method it is possible to appoint coating properties. Depending on the deposition parameters applied, it is possible to obtain DLC coatings in a wide range of hardness (20-60 GPa). The DLC coatings might be applied on high-speed steel knives for woodworking industry. The properties of DLC coatings that are deposited with optimized parameters may indicate the possibility of their application for woodworking or tools for wood-like materials in order to increase their durability.