Production of ABS-Aramid Composite Material by Fused Deposition Modeling Rapid Prototyping System

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This paper describes a method of ABS-aramid composite material production by Fused Deposition Modeling Rapid Prototyping System. In the beginning there is presented common technology of parts production by Fused Deposition Modeling method of Rapid Prototyping. Then it deals with the theoretical description of proposed concept production of ABS-aramid composite material by Fused Deposition Modeling method. In the main part it describes an experimental testing of proposed concept at the Faculty of Manufacturing Technologies in Presov in the laboratory of Rapid Prototyping. For creation of sample bodies using the FDM method of RP we used the combination of basic ABS material reinforced by aramid tissue. At the end it summarizes possible trends of further development and research in described area together with possibilities of industrial applications.

Key words: rapid prototyping, fused deposition modeling, composite material, experimental testing

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