STRATEGIES DEVELOPMENT FOR ROUGH MILLING IN FREE FORM SURFACES MACHINING

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Abstract

Several years ago, research has begun in the field of free form surface machining at the Production engineering department at the Faculty of Mechanical Engineering in Belgrade. In this research, cases with ball end mill cutter machining were analysed, especially when it is possible to machine with maximal cutter diameter loaded from software database. On this way, it is possible to obtain an approximate shape of the free form surface faster than machining with ball end mill cutter. Using developed strategies for rough machining it is possible to reduce machining time and according to this reducing the cost of production and the cost of final product. In previously developed CAM application, new machining strategy was implemented and NC code was generated using that application. Experimental verification of generated NC code was performed on the CNC milling machine. After machining, measurement of produced part was performed and it was concluded that machining was performed in defined tolerances.

Keywords

CAD/CAM systems, Free form surfaces, Rough machining, End mill cutter

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