

Preliminary communication

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Possibilities of Automating the Additive Manufacturing Process of Material Extrusion – MEX

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Abstract

The article presents the possibilities of automating production pre-processing and post-processing operations for the Material Extrusion - MEX process based on Fused Filament Fabrication technology. Automation is based on hardware and software solutions. For this purpose, a special research station was developed, equipped with a warehouse of working platforms, a 3D printer and a collaborative robot that integrates individual elements of the manufacturing process. The developed solution allows for increasing the efficiency of the manufacturing cell and reducing the operator's involvement in manual operations at the pre-processing and post-processing stages.

Keywords

3D Printing; Collaborative Robot; Material Extrusion; Rapid Manufacturing

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