

Study on the variation of the argon volume and the degree of loading of the paper filter in a 3D printer type MYSINT 100 during the process of selective laser melting of metal powders (SLM)

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Abstract.

The paper presents an experimental study on the variation of argon volume and degree of loading in a 3D printer type MYSINT 100 during the process of selective laser melting of metal powders (Selective Laser Melting) to perform dental work (dental crowns). The first part of the paper presents a series of information on the construction, operation, installation, working conditions and technical characteristics of the 3D printer type MYSINT 100. Also presented a number of aspects related to the performance of dental work using the process selective laser melting of metal powders (SLM), the importance of argon in this process. The variation in the volume of argon and the degree of loading of the paper filter with residual metal powder was determined experimentally over a number of 30 cycles of operation of the 3D printer.