

# **Realization of dental metallic works using a 3D printer type MYSINT 100 through the Selective Laser Melting process**

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## **Abstract.**

The paper presents a series of aspects regarding the design and realization of metal dental works on a 3D printer type MYSINT 100. This printer is based on the process of selective laser melting of metal powders (Selective Laser Melting) to perform metal dental works (crowns dental, dental bridges, dental implants, etc.). The first part of the paper presents a series of information on dental work, metal biomaterials (titanium-based alloys, Co-Cr alloys, noble metal alloys) used for this purpose. Below are the main stages of CAD-CAM design of metal dental works using the ExoCAD program. After obtaining the 3D model (s), they are introduced in the Magics software, to identify errors, collisions on the work platform, determine the volume of work and material consumption (metal powder). Later, they are made using the MYSINT 100 printer.