

Patent/ Application number
Patent application OSIM A 2017 00296

Short presentation
The invention is related to the development of a process (technology) for manufacturing customized implants, made of biocomposite material, reinforced with metallic structures made by SLM. The obtained implants of the multi-structure type (metal / biocomposite) are individualized for a patient and can prosthesis any area of the human bone system. It is based on CT data from which to extract the 3D model of the affected area. The final shape and the resistance structure (metal reinforcement) of the future implant it will result by using the CAD + FEA programs. The manufacture consists of two stages. The first uses two AM technologies - using SLM the metal reinforcement is made and, by SLS and Vacuum Casting is manufactured the silicone rubber mould that will form the final implant. In the second stage - the reinforcement is inserted into the silicone mould and by means of casting/injection (depending on the material recipe) the final customised implant is made.

Applicability
Medical applications, Medicine

Images

Title
**MANUFACTURE PROCESS OF MULTI-STRUCTURAL CUSTOMIZED IMPLANTATS
MADE BY AM TECHNOLOGIES**