

Automatic laser systems for solving problems of surface modification on medical devices

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This report presents the latest results on the development of laser systems designed to treat the surface and give it special properties. The laser systems being developed, Complex D and Complex M, are designed to implement four technologies for post-treatment of the surface of medical metal products. AB-Technology (antibacterial properties) is designed for the formation of a bio-restive oxide film without the use of antibiotics, which reduces the adhesion of bacteria and the formation of biofilm; BC-Technology (biocompatible properties) allows the formation of biomimetic relief and osseointegration properties; IM-Technology (identification mark) is designed to apply bioinert identification marks on the product; LP-Technology (laser polishing) allows to reduce the roughness of the surface of SLM products. AB and BS technologies for processing small-sized dental products-implants, abutments, etc., are implemented at the Complex D. The Complex M makes it possible to process products of larger sizes, such as hip pins, cranial implants, hip replacements and implement all four technologies.

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