IOP Conference Series: Materials Science and Engineering 2018 vol.412 N1

## Casting individual cervical telescopic implants for burnout SLA-models

Kashapova R., Kashapov R., Kashapov L., Kashapov N., Chernyshov D. *Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia* 

## **Abstract**

© Published under licence by IOP Publishing Ltd. The production of individual implants, modeled specifically for a specific clinical case, is increasingly used every year in traumatology and oncology. Traditionally, individual implants are made on five coordinate milling CNC machines. However, the need to create individual implants with a mesh structure requires the search for new ways of production. In this paper, the feasibility of casting telescopic implants, obtained by laser stereolithography, has been studied. The process of burning photopolymer from a flask was studied. Inducast installation cast prototypes of cervical implants. The ineffectiveness of this technology in the manufacture of mesh collapsible telescopic implants has been established, but it can be used for structures with a thickness of 1 mm.

http://dx.doi.org/10.1088/1757-899X/412/1/012097

## References

- [1] Kashapov R N, Kashapov L N and Kashapov N F 2017 Analysis and development of methods for obtaining metallic powders for selective laser melting IOP Conference Series: Materials Science and Engineering 240 012071
- [2] Kashapov R N, Kashapov L N and Kashapov N F 2015 The research of anodic microdischarges in plasmaelectrolyte processing IOP Conference Series: Materials Science and Engineering 86 012019
- [3] Kashapov L N, Kashapov N F and Kashapov R N 2013 Research of the impact acidity of electrolytic cathode on the course of the plasma-electrolytic process Journal of Physics: Conference Series 479 012011
- [4] Kashapov L N, Kashapov N F and Kashapov R N 2014 Influence of plasma-electrolyte discharge to the glass surface Journal of Physics: Conference Series 567 012024
- [5] Kashapov L N, Rudyk A N and Kashapov R N 2014 Applying 3D-printing technology in planning operations of cancer patients IOP Conference Series: Materials Science and Engineering 69 012016
- [6] Kashapov L N, Kashapov N F, Kashapov R N and Denisov D G 2016 Plasma electrolytic treatment of products after selective laser melting Journal of Physics: Conference Series 669 012029
- [7] Kashapov R N, Korobkina A I, Platonov E V and Saleeva G T 2014 The method of manufacture of nylon dental partially removable prosthesis using additive technologies IOP Conference Series: Materials Science and Engineering 69 012026