

## ABSTRACT

**Thesis:** 85 pages, 24 drawings, 14 tables, 53 sources of literature.

**Aim:** the study of the structure and properties of biocompatible coatings obtained by electric-spark alloying and laser chemical-thermal treatment of titanium alloys.

**Research methods:** gravimetric, microstructural, mikrodyurometrychnyy, x-ray, and also tests for wear resistance.

**Research subject:** structure and properties of biocompatible coatings on titanium alloys.

**Scientific novelty:** it is established that electrospark alloying alloy VT1-0 graphite creates on the surface of the biocompatible layer – TiC.

**Practical meaning:** after the spark alloying in the interelectrode medium containing glycerol, gap and carbon, allows you to get bosoms connection - TiC and microscopic areas of hydroxyapatite, as well as to create a rough surface that can positively affect the implantation of the implants in living tissue

ELECTROSCOPE PROCESSING, LASER ALLOYING, DIELECTRON  
WEDNESDAY, HYDROXYAPATITE