

ABSTRACT

Work capacity: p. – 108, fig. – 43, table. – 17, references – 60.

This work presents a review of contemporary theory and technology of titanium alloys.

The aim is to study high-temperature mechanical properties of metal-ceramic composite of Ti-TiB system.

Methods:

- metallographic analysis (optical microscopy);
- transmission electron microscopy (TEM);
- roentgen-phase analysis;
- study of high temperature properties;
- study the structure of specimens after compression tests;
- the study of creep specimens.

In this work the formation process of the microstructure and high temperature mechanical properties are investigated.

Keywords: TITANIUM, TITANIUM DIBORIDE, COMPOSITE, ELECTRON BEAM MELTING.