

ABSTRACT

The master's dissertation contains: 95 pages, 22 figures, 28 tables, 29 references.

ARMOR, CARBIDE BORE, CERAMICS, COATING, MECHANICAL BEHAVIOR, METALIZATION, MOLYBDEN, POWDER, SILICON.

The purpose of the work was to study the influence of molybdenum metallurgy-reinforced carbon fiber and silicon-boron carbide impregnated with silicon. To achieve the goal, it was necessary to solve the following tasks:

- obtain samples of boron carbide impregnated with silicon melt with the addition of carbon fibers;
- perform metalization of samples with molybdenum
- to study the influence of metallization on the mechanical properties of a composite (three-point breakage);
- to investigate the microstructure of fractures of composite samples with metallization and without;
- conduct phase X-ray analysis.

The object of research is B_4C is metallized with molybdenum-

Subject of research is the influence of metallization on the physical and mechanical properties of reinforced ceramics.

Influence of structure and phase composition of ceramics on the basis of boron carbide obtained by silicon melt infiltration method is determined. The influence of molybdenum metallization on the mechanical properties of carbon fiber reinforced boron carbide composite on structure and phase composition is determined.

On the topic of the dissertation research, the abstracts of the report on the inter-ethnic conference were published.