

ABSTRACT

The work contains: 111 p., 39 fig., 7 tabl., 49 refer.

The object of the study is the B₄C metallised Mo.

The purpose of the work is to create a technology for manufacturing ceramic plates of boron carbide with increased mechanical characteristics by infiltration of presses from boron carbide powder and molybdenum metallization of their surface.

Methods of manufacturing samples: pressing - using a hydraulic press, impregnation - muffle furnace inductance, metallization - Installation of vacuum spraying.

The structure and mechanical behavior of ceramics have been investigated using methods of physical material science (scanning electron microscopy and microhardness meter), the content of phases has been investigated by X-ray diffraction analysis, and the structure of the samples has been found during electron microscopic studies of the ceramic surface.

The dependence of hardness on the temperature of the carbon fiber reinforced boron carbide coating on the structure, phase composition and micromechanical properties of the molybdenum coating is established.

Key words: BRONIA, POWDER, CERAMICS, CARBIDE BAR, MOLYBDEN, SILK, METALIZATION, MECHANICAL BEHAVIOR, COATING.