

ABSTRACT

The work contains: 76 p., 16 fig., 16 tab., 44 sources.

Object of study - composite materials based on boron carbide.

The aim is to study the impact of the intermediate layer of nickel on the structure and properties of composite materials of B₄C-Al systems received by impregnation.

The method of obtaining composite materials of B₄C- Al-based alloy system was developed and a comprehensive study of the samples (metallographic analysis, chemical analysis, durometric analysis) was conducted.

The results showed that cladding boron carbide with nickel with subsequent annealing eliminates the problem of obtaining composite (unwettability of boron carbide with aluminum).

Keywords: COMPOSITE MATERIALS, COMPOSITE, BORON CARBIDE, ALLOY AK12, WETTING, CLADDING.