

Vol. 14, Number 4, 2005

Phase Formation in the Ti-B System

A.G. Merzhanov, D.Yu. Kovalev, V.M. Shkiro, and V.I. Ponomarev

*Institute of Structural Macrokinetics and Materials Science,
Russian Academy of Sciences, Chernogolovka, 142 432 Russia*

ABSTRACT

The phase composition of self-propagating high-temperature synthesis products has been analyzed in the Ti-B system using X-ray analysis. It has been found that the final product is not an equilibrium compound. The quantitative content of the intermediate phases is essentially dependent on the material cooling rate in the postpropagation zone and the particle size of the initial powders.

Keywords: *SHS, product equilibrium, titanium boride.*