

Vol. 12, No. 3, 2003

Some Applications of TiAl Micropowders Produced by Self-Propagating High-Temperature Synthesis

R. Mania, M. Dąbrowski, E. Godlewska, S. Koziński, A. Rutkowska, B. Trybalska, and K. Wojciechowski

Faculty of Materials Science and Ceramics

AGH University of Science and Technology, Al. Mickiewicza 30, 30-059 Kraków, Poland

Cracow University of Technology, Al. Jana Pawła II 37, 31-864 Kraków, Poland

This paper presents some practical applications of TiAl intermetallic powder obtained by self-propagating high-temperature synthesis (SHS). A hot-pressing technique was used to form dense TiAl sinters (also doped with ruthenium) that were subsequently used as cathodes in the arc plasma deposition of hard coatings on cutting tools. SHS is shown to be a technique enabling manufacturing of TiAl micropowder with grain sizes and shapes suitable for the deposition of protective coatings by plasma spraying.