

Novel Prealloyed Fine Powders as Binders for Cemented Carbides

Leo Prakash¹, Benno Gries²

¹Technology, WTP Materials Engineering, Germany, ²Corporate R + D, H.C. Starck GmbH, Germany

Abstract

The majority of cemented carbides are manufactured with Cobalt as the binder metal. It is now well known that cemented carbides with other metallic binders based on Iron or Nickel or their alloys could be tailored to improve on defined characteristics of the cemented carbides.

This paper presents a new family of alloyed binder powders with the trade name AMPERSINT COM that could be used for manufacturing cemented carbides with tailor made properties. The advantages of these novel alloyed binder powders are compared to those made from elemental powders and discussed in terms of mechanical properties and health and safety aspects.