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新成形剂流变性能及其热脱脂特性

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摘要: 对新开发的几种硬质合金挤压成形剂的流变性能与脱脂行为进行了深入的研究, 发现成形剂的设计及混炼决定其流变性能与脱脂行为, 合理地选择成形剂的组成及配比是挤压成形新工艺技术的关键。实验条件下测得成形剂组织均匀, 粘流活化能在80~115 kJ/mol之间, 粘度对温度的依赖性较小; 在热脱脂时, 成形剂脱除速率较均匀, 便于工艺制定与控制。

关键字: 挤压成形 成形剂 流变学 热脱脂

RHEOLOGICAL AND THERMAL DEGREASING CHARACTERISTICS OF NOVEL FORMATIVE AGENT

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Abstract: Rheological and thermal degreasing characteristics about several kinds of novel formative agent system used for hardmetal powder extrusion molding have been studied deeply. The formative agent's design and its mixing decide their rheological properties and degreasing behaviours. The formative agent's components and formulations which have been selected carefully and reasonably are the key to the new PEM(powder extrusion molding) technology. Under the experimental conditions, the formative agent's microstructures are homogeneous phase; the viscous flow activation energies are 80~115 kJ·mol⁻¹; the formative agent's viscosity is little dependent on temperature, and the formative agent's thermal removal rates are also even during the degreasing temperature range. These properties are very useful for the technical control.

Key words: PEM formative agent rheology thermal degreasing

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