

PAPER ABSTRACT

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TITLE OF PRESENTATION: "Recent Advancements in Cemented Tungsten Carbide Tooling and Wear Parts for the Mold Making Industry"

BRIEF DESCRIPTION OF CONTENT: Tungsten carbide is used in the plastic injection molding industry for core pins, hot runner nozzle tips and other tooling applications that require reduced deflection and superior thermal conductivity. The use of tungsten carbide in these demanding operations will result in reduced core deflection, superior cooling, improved resistance to deflection, reduced cycle times and exceptional wear life.

The purpose of this paper is to document and discuss the latest advancements in the cemented tungsten carbide industry which include; new binder systems for improved corrosion resistance and smaller grain sizes that result in harder more wear resistant grades with increased edge strength. This paper will also discuss two (2) process improvements; the sinter-hip process which is the latest advancement in sintering technology that results in a cemented tungsten carbide product with a more uniform microstructure and the relatively new advanced technology of injection molding of tungsten carbide for cost reduction of complex components.
