

## **Characterization of Ceramic Metal Cutting Tools**

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Kennametal Inc. is one of the world leading manufacturers of metal cutting tools, and supplies products to a variety of industries ranging from aerospace and automotive to earthworks. Materials Analysis group supports research and development, quality assurance, and process investigations.

Cutting tools have wide variety of grades, geometries suitable for each application. Among those ceramic cutting tools are widely used for applications which require excellent high temperature performances. Microscopic properties such as phase compositions, crystallites sizes, surface residual stresses, non-crystalline contents are important factors affecting the performance and quality consistencies. Our capabilities, experience, limitations for the characterizations of these properties, and possible problems will be discussed.