

FLANK SUPERABRASIVE MACHINING

ABSTRACT OF THE DISCLOSURE

The present invention relates to a quill to be used to superabrasively machine complex shapes, such as airfoil shapes, into a substrate. The quill has a shaft portion, an enlarged head portion adjacent the shaft portion, and a tapered grinding portion adjacent the enlarged head portion. The tapered grinding portion has a layer of grit material selected from the group consisting of diamonds and cubic boron nitride thereon. In a preferred embodiment, the quill is a vitrified or plated cubic boron nitride quill on the grinding portion. A method of using the tool is also disclosed.

Figure 1