

37 - 8 Influence of Grinding Fluid Supply on

Ultra-Smoothness Grinding of Al₂O₃-TiC Ceramic

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To machine the ceramic component of high quality by low productive cost, the high productive ultra-smoothness grinding technique of the fine ceramics has been strongly required. To improve the productivity, in our previous researches, the newly devised ultra-smoothness grinding method is proposed and ascertained to be useful for finishing the silicon carbide ceramic to near the ultra-smoothness surface of below 30nm (Rz) or 2.0nm(Ra) in the measuring area of 256 μ m x 256 μ m. This is one of a series of the researches on ultra-smoothness grinding of fine ceramics.

In this report, the influence of the grinding fluid supply on ultra-smoothness grinding of Al₂O₃-TiC ceramic is examined. The three types of grinding fluids are used for the examination. It is found that the suitable selection of grinding fluid is necessary for forming the ultra-smoothness surface.

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