

38-12 Ultra-Smoothness Grinding of Cemented Carbide

Using Newly Developed Method

知能生産システム工学科 教授 安井平司
大学院自然科学研究科 前期課程 山本雄記
大学院自然科学研究科 前期課程 宮本謙輔
大学院自然科学研究科 前期課程 古屋昌吾
職業能力開発総合大学校
精密機械システム工学科 澤 武一

The high productive ultra-smoothness grinding technique of difficult-to-cut metals such as cemented carbide, hardened die steel and so on has been strongly required. In our previous researches, the newly devised ultra-smoothness grinding method is proposed and ascertained to be useful for finishing the ceramics to the ultra-smoothness surface below 30nm (Rz) or 5nm (Ra).

In this report, ultra-smoothness grinding characteristics of cemented carbide are examined. The specification of metal bond diamond wheel used is the grain size of #140 and the concentration of 50. The observation and roughness measurement of the ground workpiece surface are done with Nomarski differential interference microscope and Scanning Electron Microscope (SEM), and with the surface interferometer (WYKO TOPO-3D), respectively.

(The 20th Annual Meeting Proceeding of American Society for Precision Engineering, 2005. 10)