

39-23 Investigation on High Depth of Cut of Ultra-smoothness Grinding of a Glass by Means of Newly Developed Grinding Method

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To improve the productivity, in the research, the influence of high depth of cut on the surface roughness of a glass formed by the new method is examined. The wheel used is a metal bond diamond wheel of the coarse grain size of #140. The observation and roughness measurement of the ground workpiece surface are done with a microscope and SEM, and with the surface interferometer (WYKO TOPO-3D), respectively. From the results, the 3D surface roughness of below 30nm (Rz) or 5nm (Ra) in the measuring area of 0.256mm x 0.256mm is obtained at the depth of cut of 50mm . The high depth of cut of grinding by the new method is ascertained to be available for the grinding of a glass.

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