

## Differences at the Surface Roughness by the ELID and Grinding Technology

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This paper deals with surface roughness and surface profile in high precision methods of materials finishing. One of them is ELID grinding process and the second method is fine grinding. There is surface profile and roughness compared of the three materials samples – carbide steel and two aluminium alloys. In the paper are shown the principle of the ELID grinding and fine grinding, results of surface measurement between ELID and ground surface. Both methods are very precision in the focus on surface roughness – measured units in nano scale. The paper shows also real topology of the surfaces and visible tool marks especially by the fine grinding method. Next we can see new possibilities in finishing methods for different areas of the production, automotive, aerospace, medicine and cosmic industry.

**Keywords:** ELID, Fine Grinding, Roughness, Tool Marks, Surface profile

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