



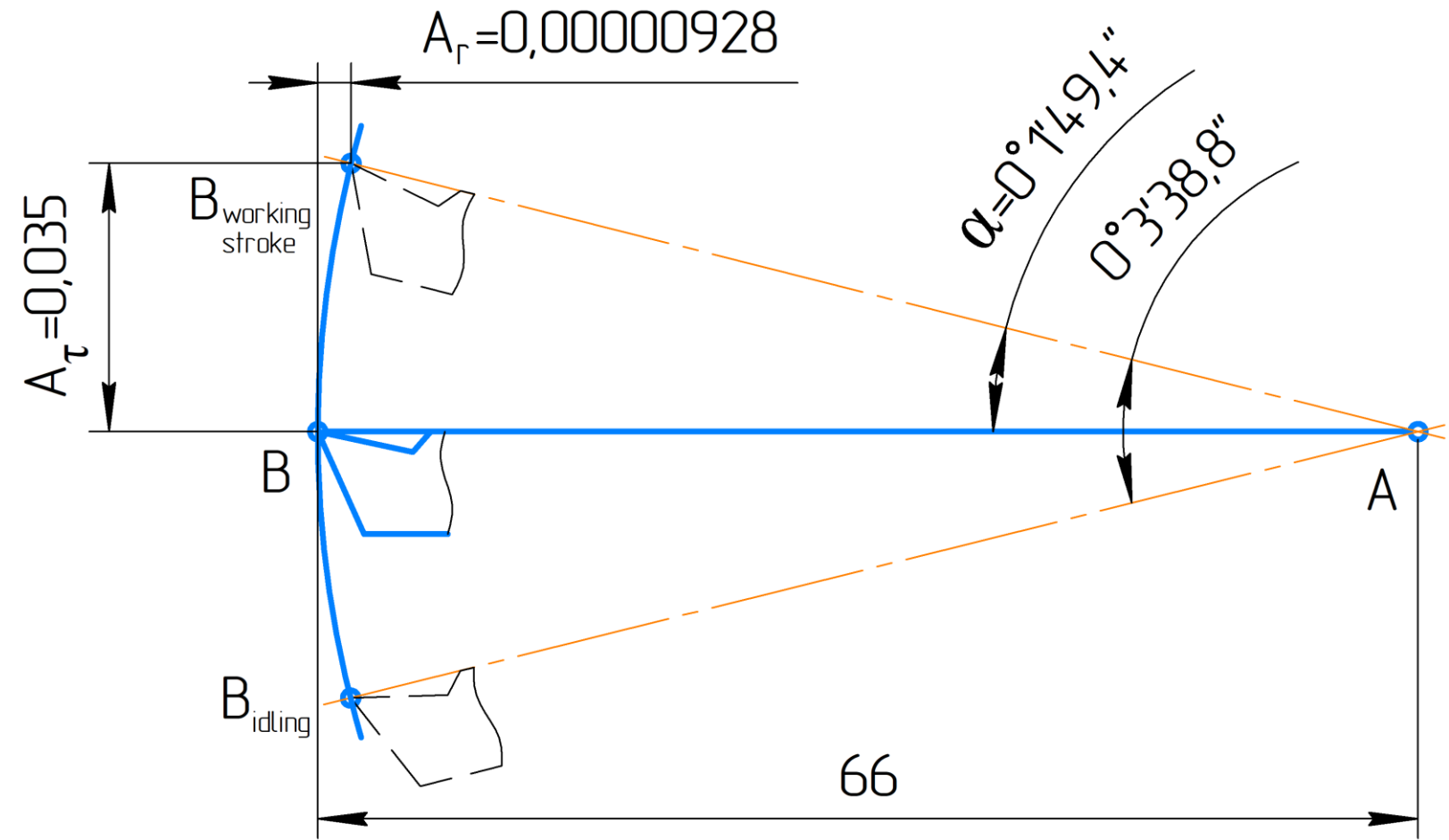
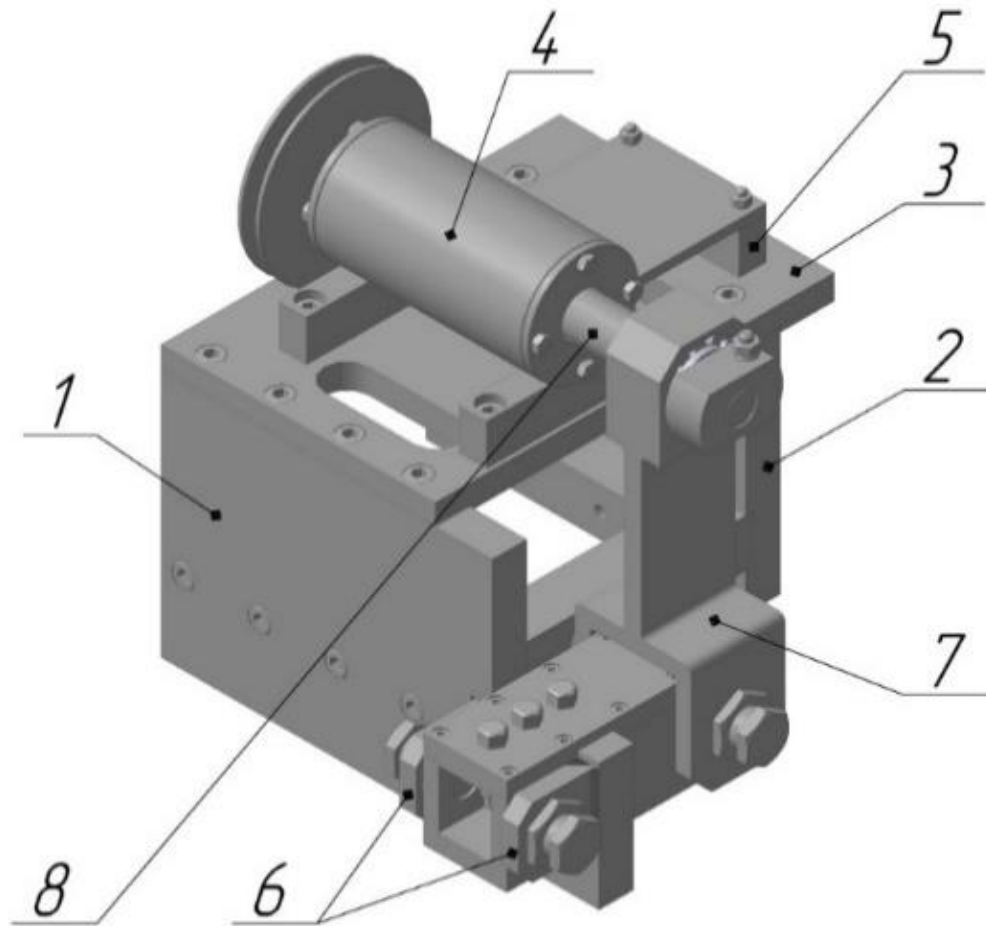
Using vibration cutting for finish turning hard materials

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General view of vibration cutting unit and Cutter corner vibration trajectory



Types of chips



traditional turning
cutting speed of 85 m/min;
feed of 0,26 mm/rev

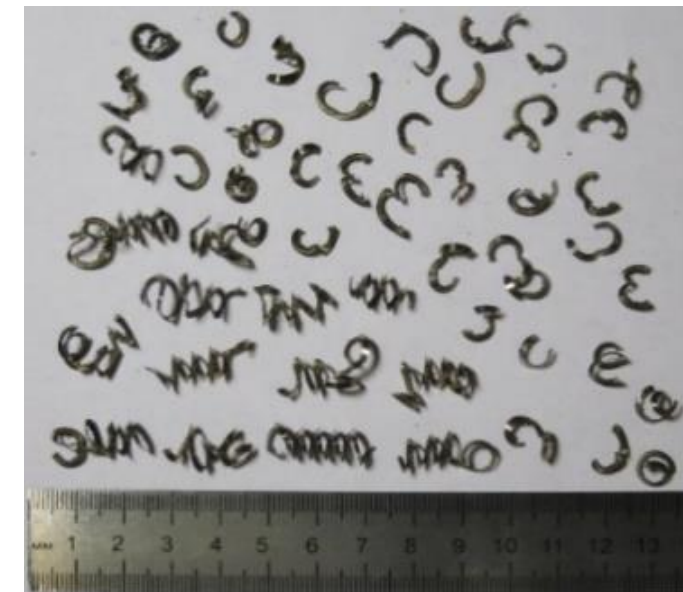
cutting with vibrations
 $A = 5 - 10$ microns;
 $f = 5 - 10$ Hz



cutting with vibrations
 $A = 70 - 100$ microns;
 $f = 50 - 70$ Hz

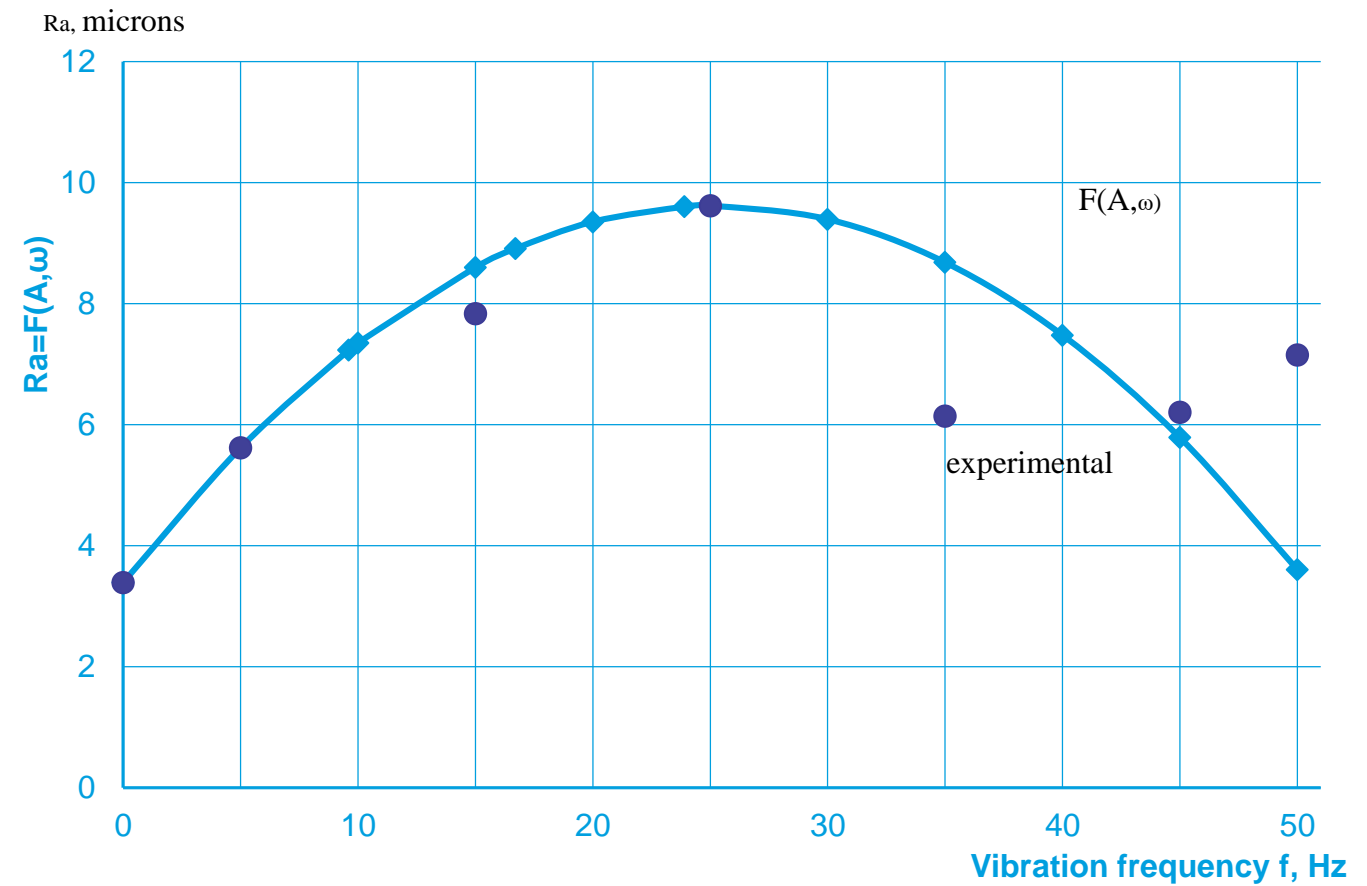
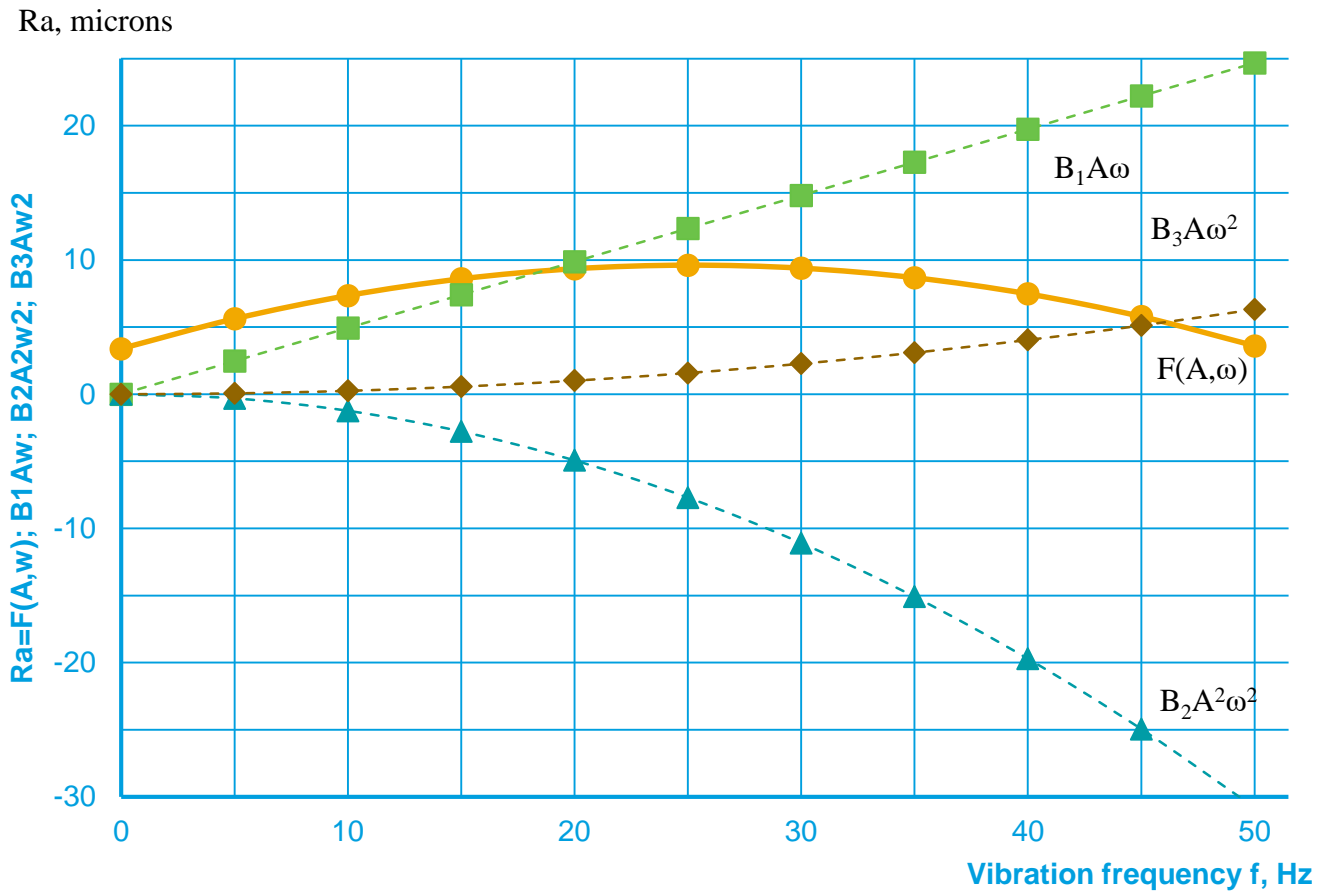


cutting with vibrations
 $A = 30 - 50$ microns;
 $f = 15 - 25$ Hz



Calculated dependence of vibration impact function on vibration frequency at $A = 100$ microns and

Dependence of vibration impact function and experimental roughness on vibration frequency at $A = 100$ microns



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