

High-speed Machining

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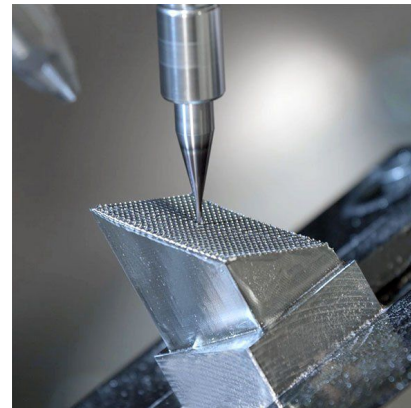
Department of Mechanical
Engineering Technology and
Metal-Cutting Machines

Department of Foreign
Languages

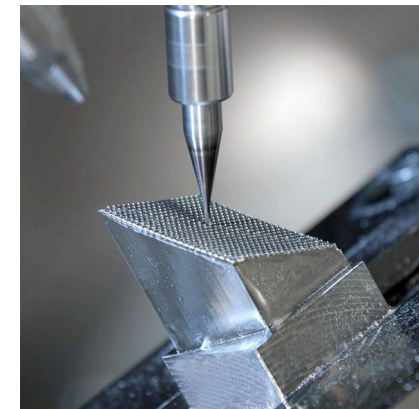
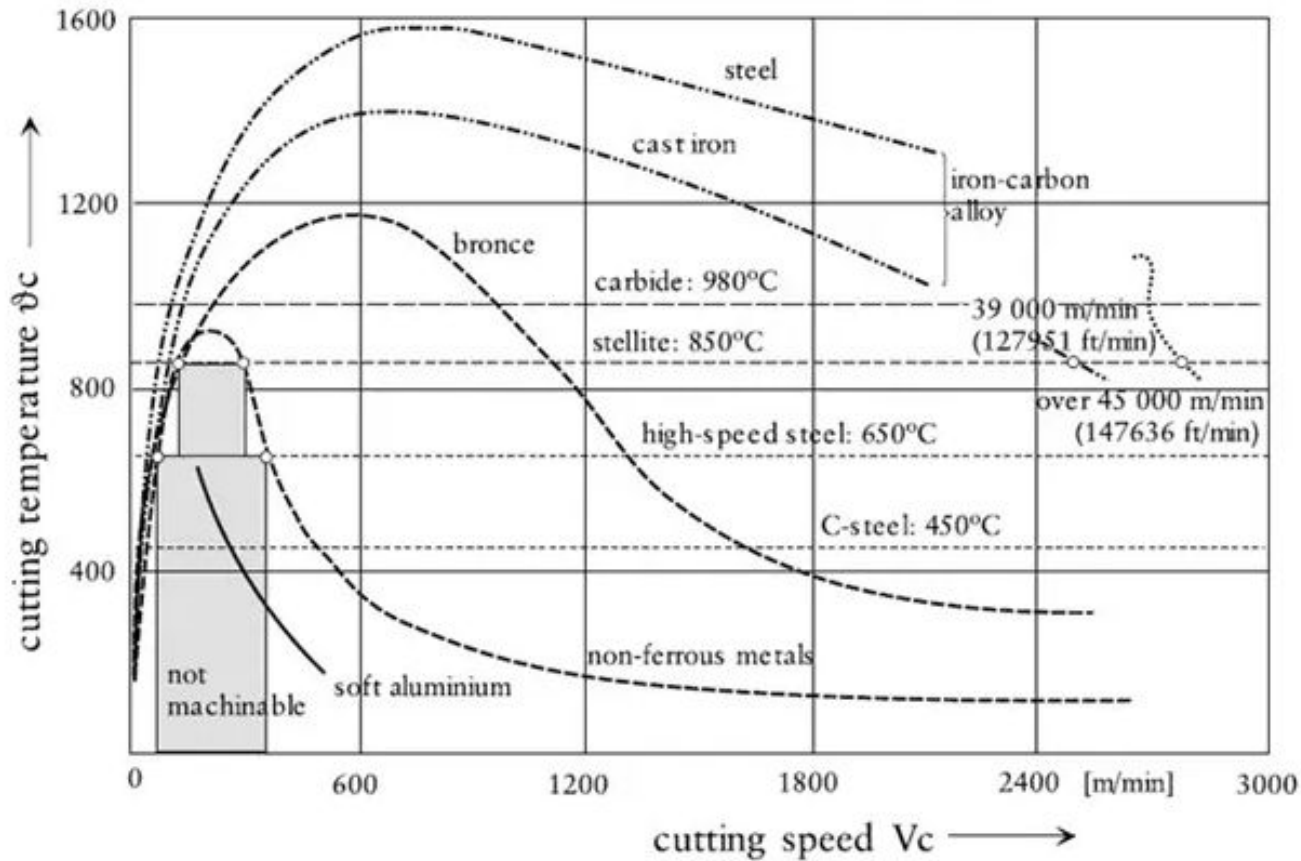


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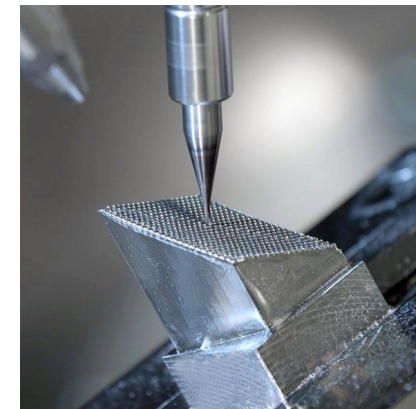
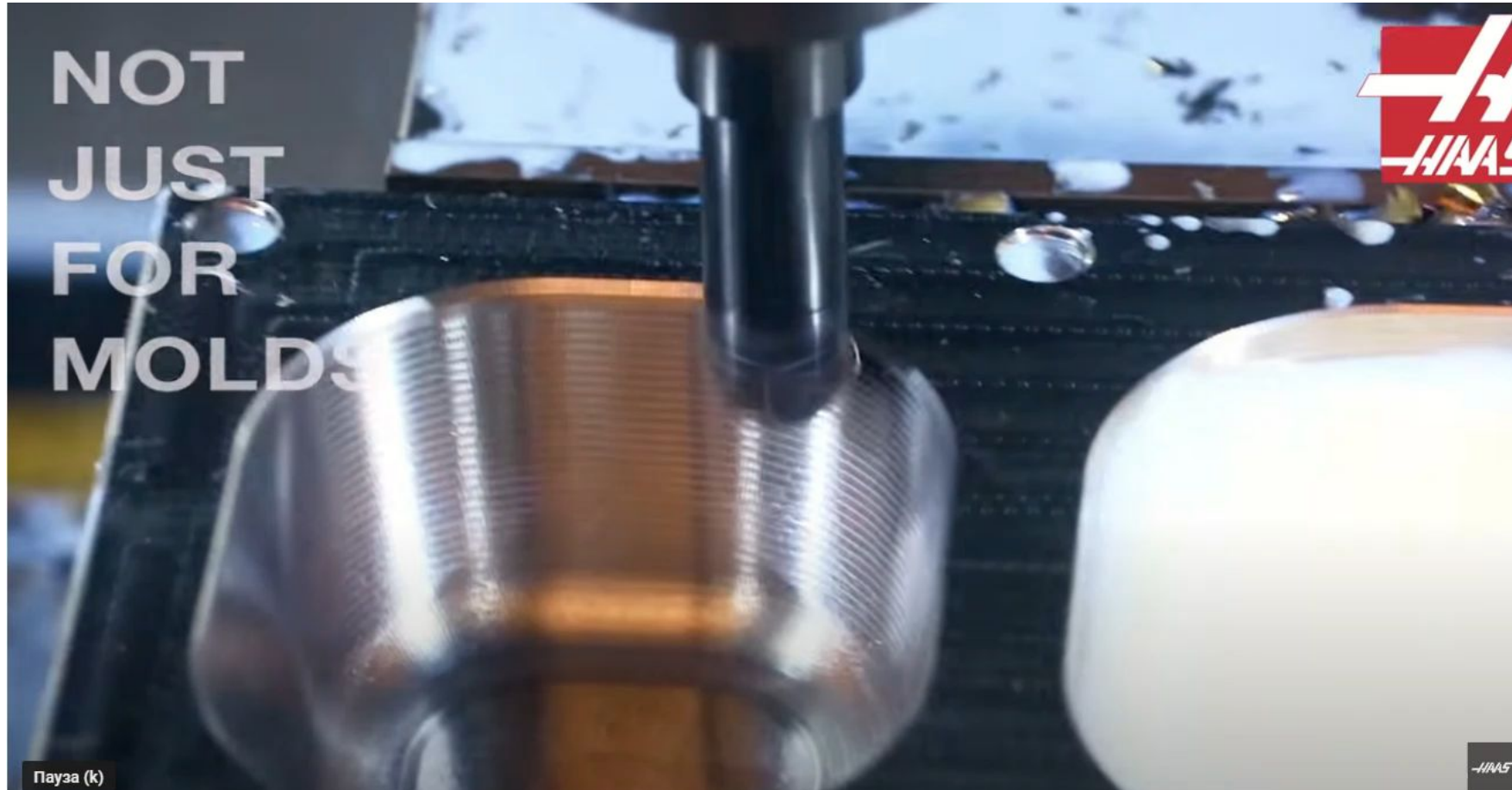
- **Machining temperature in milling at high cutting speeds**
- **High Speed Machining for Milling Machines**
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Machining temperature in milling at high cutting speeds

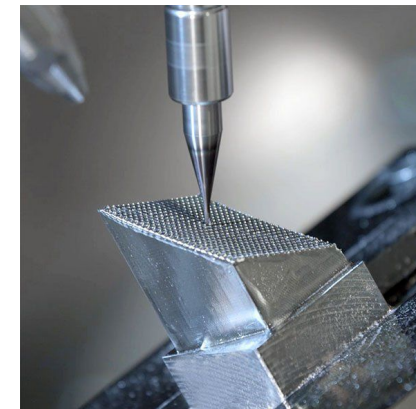


High Speed Machining for Milling Machines

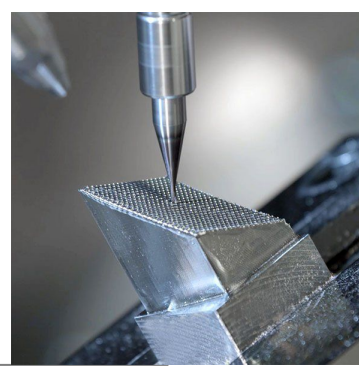


Selecting a Cutter

Material	Operation	Machine Requirements
Titanium	Roughing, Low RPM	High Torque
Titanium	Finishing, High RPM	Low Torque
Aluminum	Roughing, High RPM	High and Low Torque, High HP Depends on A_p and A_e
Aluminum	Finishing, High RPM	Low Torque, Low HP
Steel (300M)	Roughing, High RPM	High Torque, High HP
Steel (300M)	Finishing (after heat treat), High RPM	Low Torque, Low HP



Conclusions



- High-speed machining, specifically milling, has the same variables as traditional milling. However, in a high-speed machining operation, slow, heavy cuts are replaced by fast, lighter cuts.
- Before starting any high-speed operation you need to examine the machine tool's power/torque graph to make sure that the machine will be able to handle the requirements that are needed
- Which tool to deploy, depends on a specific part.

Thank you for your attention

