

How to hone skews, gouges, parting tools, and ring/hook tools

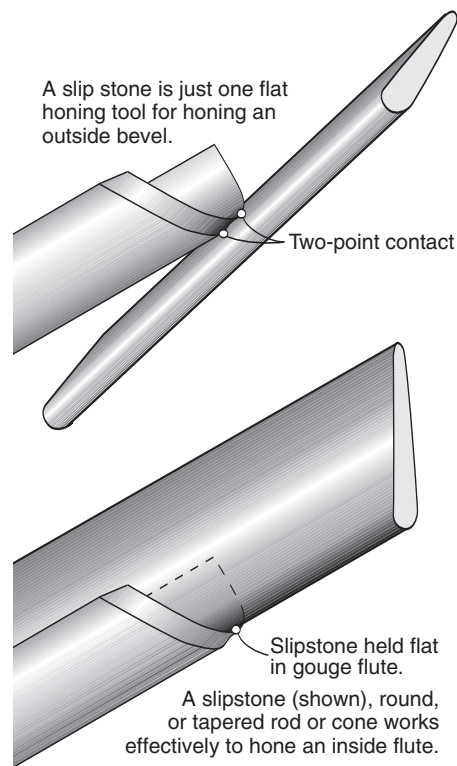
Shaping the tool and grinding properly are fundamental and are more critical than honing. You can't hone a poorly ground tool and it's a complete waste of time to hone unless you've performed these other steps well.

Assuming you have acquired a serviceable shape for the task, grind the tool to a level where honing will both be possible and beneficial to the turning process. Here's what works for me: Aim for slight hollow-ground bevels and minimal facets—especially facets above the concave face of the hollow-ground bevel.

Why hollow-ground bevels work best

Why a hollow-ground, why not a flat or convex bevel? The only reason I see for the hollow-ground bevel is that it provides me with a built-in honing guide. As long as I have a two point contact surface, I can better feel the honing process (see illustrations at right). However, there must be a balance between too much and too little hollow grinding. I prefer the concave profile a 6" to 8" diameter wheel produces. A smaller-diameter wheel produces such a deep hollow that it may weaken the edge; a larger diameter produces almost no hollow and is more difficult to hone.

Producing a ground surface with minimal facets is essential. If there are multi-facets that arise above the line from the heel of the bevel to the cutting edge, then



For me honing is like a cold swim--quickly in and quickly out. The honing process should be under 45 seconds in most situations—even with a large tool like a roughing gouge. If it takes longer, then either I have a poor honing technique or the edge is past the point of being honable. Then it's back to the grinder.

you'll be honing only the high points and not refining or improving your edge. Just as in grinding the edge, I train myself not to hone the edge—focus on the bevel. If you focus on the edge, invariably you'll grind a short bevel just behind the cutting edge. Or when honing, you'll "dub" or rollover the edge.

When we talk of honing there are usually two ways to understand it: hand-honing and power-honing. When hand-honing, you make use of a stone, rubberized abrasive or piece of leather. Among turners, some type of stone is most common.

Tips to select the proper stone

First, select a suitable stone. I've had the best luck honing contemporary tool steels with the man-made India slipstone in a medium grit and, of course, with diamond (fine and super fine). Technically the India stone is an oilstone, but I tend to use them dry and regularly clean the build-up of metal particles with WD-40. The India slip is fine for removing burrs from the inside of gouges and the flat side functions to hone the outside bevel of gouges. However, in a short time the flat side becomes concave and does not work so well for skews and parting tools. (It is still okay for gouges, but not for the flat tools.) For flat tools (and an occasional outside bevel of gouges and ring/hook type