

Turning Tools - The FAQ

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What kind of Steel should I use?

Especially in making your own turning tools, as opposed to just buying them already made, you have to balance the ease of forming the hooks, bevels, and flutes with the wear resistance (or how much you'll be sharpening it) for normal daily use. HSS is great because it holds an edge longer than a high-carbon tool steel but, for normal shops, it's very difficult if not impossible to create your tool out of it depending on what you're making, of course. If in doubt, choose high-carbon tool steel.

What kind of Steel do I have?

There are a wide variety of steels with an almost unlimited numbers of different additive components like titanium, nickel, and zinc. For the occasional tool-maker, knowing exactly what you have isn't really necessary. A basic idea of the type is all that is necessary with high-carbon tool steel and High Speed Steel (HSS) being the 2 main ones we're interested in.

A good test is the spark test. High-carbon steel, when ground on a wheel, will emit lots of yellow-ish sparks that look "fuzzy" (fig. 5 to the right). HSS will give off fewer sparks and they'll be less "fuzzy" looking. They're also more orange color. (fig 6 to the right).

If the spark is yellow-ish and there's lots of sparks and they look "fuzzy" then you probably have a high carbon steel. If it's yellow-ish but doesn't have a lot of sparks, then the carbon content is probably low and won't harden very well.

Where can I find good steel to use?

First of all, what **not** to use: Old files or screwdrivers, etc. They are usually made of inferior steels and have been designed and heat treated for completely different purposes than what you want. Stay away from these unless you are absolutely sure of what steel they're made from and how to re-forge them into something possibly useful. Some hammers, railroad ties or spikes, cold chisels and other old tools may be used but be very careful.

If you're the scavenger type of person, farm equipment and automotive parts are the best place to find what you need. Auto salvage yards are quick and easy places to get steel. You're not very likely to find HSS there or at least not very easily obtained pieces large enough for your use. Good Tool Steel can be found in: leaf springs, coil springs, shock absorber rods, and big axels. Aircraft mfg plants or salvage yards have lots too.

If you'd like to purchase new steel, check your local yellow pages for tool or commercial mfg supply companies. National companies such as Fastenal, MSCDirect or Enco usually will have a good price on what you want.

