

## **Demonstration on Sharpening & Tool Techniques**

### **INTRODUCTION & OVERVIEW:**

The following is a rough outline for my demonstration at the Southern States Woodturning Symposium in Gainesville, GA. held in 2011. The first half of the demonstration will be devoted to the techniques that I use to sharpen my tools and to explain why I sharpen my tools the way I do. In the second half of the demonstration I will show how I use the tools to perform a variety of cuts, with emphasis on how I use the various tools and why certain bevel angles or tool shapes may help to make my turning easier and more efficient. As I am known for my delicate finials, I will attempt to share with the audience those little things that I do to help finesse my turning skills and how I hold and present my tools to the work. This demonstration should be helpful to even the most experienced turners as they may discover some little technique that I use that may be just be that one thing that they needed to push their skills up a notch or two.

The goal of this demonstration is to show how I sharpen my tools using the Oneway wolverine sharpening system and if there is time demonstrate how I would sharpen my tools freehand. The emphasis will be on the shapes and bevel angles that I find work best for me for the type of turning that I do and explain why I grind my tools the way I do and how these grinds help make my turning easier.

In the second half of my demonstration I will, time allowing, show how I use each of the tools that were previously sharpened and describe some of the techniques that I use to optimize the use of each tool. When turning I enjoy each cut and aim for optimum control to achieve the cleanest, crispest cuts with the utmost control so that my sanding will be minimized. Rather than just hog the wood away I prefer to take controlled cuts and to use finesse to remove the wood. Even though I am at times a production turner, I take great satisfaction in each cut and enjoy the process of turning as much as the finished result of a day at the lathe.

### **GRINDER SAFETY & TIPS**

**The following is a list of safety tips taken from my handout titled “Sharpening for Woodturners” that can be found in my woodturning lab manual titled “Let’s o for a Spin”**

- a. Optimum height for grinding system is the same as optimum lathe height which is the same height as your elbow.
- b. Grinder safety shields and all other safety equipment supplied with the grinder, should be installed and functioning properly.

- c. Emphasize the use of safety goggles or some sort of eye protection.
- d. How to test a wheel to hear if it is still sound by taking off the grinder and tapping it to hear if it rings, if you hear a dull thud the wheel is defective and should be replaced immediately.
- e. Stand aside when turning grinder on and let it get up to speed before grinding tools.

*\*Never restart the grinder, if the wheels are still spinning from the last time that it was on, as this may cause the nuts on the wheels to work loose from the tork of start up combined with the already spinning wheels.*

f. How to use a star dresser or preferably diamond tipped dresser or some other type of wheel dresser to flatten and freshen up the face of the wheel. My favorite diamond dresser is the T shaped one available from Craft Supplies Woodturners catalog.

g. If using a jig, explain how to mount the tool in the jig and how to properly use the jig. Be sure to remind students to check to be sure all jigs are tightened properly and to check once in a while to insure that they have not loosened up from the vibration of the machine.

*Note: If using the Oneway varigrind jig or similar jig be sure to mention that one hand holds the jig in the pocket and the other hand is on top of the jig not on the tool handle. Holding the tool handle provides too much leverage and usually results in the tool and jig hitting the side of the wheel and chipping the wheel or worse. Also warn the students, to keep their hands in a position so that they will not get caught between the jig/ tool and the grinder should an accident occur.*

- h. Tool should be ground at or above the most sticky out part of the wheel (at or above center) on the face side only.
- i. Just enough pressure is applied to hold the tool on the wheel.
- j. Try to make use of the whole face of the wheel to avoid dishing it out. There is no need to whip the tool back and forth across the wheel just hold it steady in one spot then ease it over to another spot eventually making use of the whole wheel.
- k. The proper use of water to keep the tool steel cool while sharpening.
- l. Check the safety instructions that were provided with your grinder. Also read the safety guidelines prepared by the American association of Woodturners and those that I have included in the beginning of my lab manual titled "Let's Go For a Spin

#### **SHARPENING BASICS:**

1. Describe and show how to look at the sharpened edge to get a feel for when it is sharpened. (with an even bevel all the way around and the lack of reflection at the edge). Never touch the edge of a tool to check on how sharp it is, as this will inevitably result in a nasty cut.

**SPINDLE ROUGHING GOUGE:**

**Demonstrate how to use Spindle Roughing Gouge**

**SPINDLE GOUGE:**

**BOWL GOUGE WITH TRADITIONAL GRIND:**

**BOWL GOUGE WITH SIDE GRIND:**

**DEMONSTRATE HOW TO USE SPINDLE AND BOWL GOUGES TO DO THE FOLLOWING CUTS; FACING CUT, CONVEX CURVE OR BEAD, CONCAVE CUT OR COVE**

**SKEW WITH STRAIGHT GRIND:**

**SKEW RICHARD RAFFAN STYLE?:**

**SKEW ALAN LACER STYLE:**

**DEMONSTRATE HOW TO USE SKEWS:PLANING CUT, BeAD, FACING CUT, PEELING CUT AND V-CUT**

**PARTING TOOL RECTANGULAR/SQUARE:**

**DIAMOND PARTING TOOL:**

**SCRAPERS ROUND NOSE:**

**SCRAPER SQUARE:**

**JIG FOR HOLLOWING TOOL BITS:**

**TOOL TECHNIQUES:**

**ROUGHING GOUGE:**

Rough out a square 1/2 of a square blank showing how I use the gouge in a roughing cut followed by pointing the tool in the direction of the cut for a smoother cut and concluding by demonstrating how I use the flat side of the gouge to do a cut similar to that of a skew when used to do a planing cut. It might also be a good idea to point out how useful the corners are for cutting a cylinder right up to the side of a bead or a pummel.

### **SPINDLE GOUGE:**

Demonstrate the facing cut (show how to cut in a square pummel and a rounded pummel) followed by a convex cut (bead), then the concave cut (or cove).

While working on the spindle cuts go ahead and demonstrate how useful the traditional ground bowl gouge is for cutting an ogee in a pummel.

### **BOWL GOUGE:**

Demonstrate turning the outside of a bowl (convex cuts) while gliding along on the bevel followed by showing how to use the side grind in a scraping manner then in a shear cutting or slicing scrape. Cautiously consider explaining how to use the side of the side ground gouge by gliding along the side bevel and carefully being sure to stay on the bevel without rolling off the bevel as it will cause the worst of nasty catches.

### **SKEW:**

Show how the various styles for grinding a Skew Chisel have advantages over the traditional way a Skew is ground.

### **SCRAPERS:**

Demonstrate how they are used, be sure to emphasize the fact that one should avoid making bevel contact with scrapers. Point out that scrapers can be ground to a variety of shapes to achieve the desired cut and that they are very useful when an exact diameter needs to be cut or one is after a very precise shape. Many turners use scrapers to clean up the surface of a bowl or platter prior to sanding often times using them to shear scrape the outside of a bowl.