Kurt's clinic Kurt Hertzog answers some readers' questions

Knot in a pen blank

Question: I just received this pen blank. I contacted the supplier and said this blank is defective. The supplier said it is normal to have a knot in a pen blank. Is it though? Thoughts?

Sometimes flaws are evident on the blank surface and sometimes become visible after turning. Is this a flawed blank or a natural piece of wood with some character?

While knots, inclusions, and flaws can add some difficulty, avoiding them prevents some great turnings. This red Cedar scoop has interest with the branch inclusion

Answer: Your question pertains to a pen blank but I'd like to expand it to blanks in general. Personally, I like included 'flaws' in my woods whether a bowl, pen or other blank. As long as they are flaws which are safe to turn, these can offer a natural beauty and unique look. Of course, internal deviations such as knots, bark inclusions, twisted grain, and other natural occurrences can present drilling, cutting, turning, and finishing challenges. All of these can be overcome without too much difficulty. If you don't feel you can succeed with these wood deviations or don't like the look, petition your vendor to replace it. They may or may not. Remember, wood is a natural product and often contains variations both internal and external. Unless you paid a very premium price for a special pen blank, I'm guessing your supplier will hesitate to take the time to accept a return, select a piece to be certain to please you, and then eat the cost to send your new blank to you. A couple of advantages of shopping locally vs mail order or internet are: you help support your local retailer who helps you (and your club) in many ways; and you get to select each and every blank that you buy, whether a pen blank, a bowl blank or flat stock.

Trouble with Olympian kits

Question: Does anyone else have trouble with Olympian kits? The smaller tube of the lower barrel is a little undersized for the drill bit it recommends. It seems I can never get enough glue between the tube and the blank. There is always a little space. I've tried CA glue and epoxy. Every other pen I've turned has a better fit. A 15/32 is too small and 31/64 (came with the kit) is too big. Any advice out there?

Answer: Welcome to the world of dissimilar materials. Your pen parts are metal and typically are screw machined or extruded through tubing dies, accurate and repeatable to thousands of an inch, and will not change size or shape within your means of use. Your wood, grown in some part of the world, is a natural product undergoing various drying methods and has some dryness state or relative humidity equilibrium as you use it. Here are some truths you should accept. First and foremost, depending on your

You don't do much drilling with the shank of a drill. Measure the real drill size at the working end across the flutes

In my opinion, one of your best investments. With a letter, number, and fractional drill index you can always find the actual size you need

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Regardless of the kit spellout, pick the drill sizes you want based on your desired clearances for your selected adhesive

My adhesive of choice is polyurethane, the small gap-filling foaming cure. Its forever pliability eases the wood cladding's life of movement

method, feeds and speeds of drilling, orientation of the grain relative to your drilling, and species of the wood, your holes as drilled will vary in dimension. Also, consider that, unless you own a relatively high-priced drill index, your drill size might deviate some amount from the indicated size. We won't even talk about drill sharpness and drilling process, i.e. polishing your way through things with force and speed, or no debris exit. Another consideration is when you drilled your holes and when you decided to glue things up. Was it in short order, later in the day, the next day, or longer?

My suggestions to solve each and every one of these issues are pretty simple but specific. Do not drill any block of wood you need to remain sized, shaped, and true until you are ready to use it. I mean drill your blank and get your tubes glued and inserted pronto. I do mine in less than an hour, regardless of the quantity I'm processing. It might not be that time-critical but letting things sit around drilled is borrowing trouble. Gluing soon removes the time for your wood to move, shift, stress, relax, change internal moisture content, or twist much. Check your actual drill size against the tube you will be using. Get out (or buy) your inexpensive set of dial callipers or micrometer to measure the tube and measure the drill to see what amount of clearance you'll have for glue.

You need not have expensive measuring gear since absolute accuracy is not important. We are making a relative measurement of tube and drill. Regardless of the drill values spelled out by the kit maker, you can allow the amount of glue clearance you desire based on your adhesive selection. Thin viscosity CA requires virtually no clearance, while medium or thick require a small amount. Epoxy can require more and polyurethane perhaps more. We're not talking a lot of space but you'll want enough room not to squeegee off the adhesive as you insert the tube, as well as not enough clearance that you require the adhesive to fill big gaps around the tube.

A wise investment for your shop is a drill index that contains letters, numbers, and fraction sets of drills. That will let you select a drill with your desired clearance. Remember, the stamped indication is a lie. Measure the drill across the flutes to determine the real size. The shank does no drilling so don't measure there. When you are dealing with species you have little experience of, drill the waste material you are cutting off the blank in the same manner that you will drill the blank. Test fit that for hole for your clearances. That will tell you the real situation about how your final hole sizes up when all the factors are considered. My process, right or wrong, is to drill the blanks just prior to gluing, use my same shop drill press after checking the drill size flutes against the tube, and using the same adhesive for everything (except laser-cut kits).

I use polyurethane since it foams and fills the gaps nicely, yet remains somewhat pliable forever. Wood will take on and give up moisture for the rest of its days, along with the three different coefficients of expansion. The brass tube never moves in size. Having a rigid adhesive bond seems like a recipe for wood failure, so I opt for an adhesive with a bit of compliance. Necessary? Perhaps not, but polyurethane works as well as anything else and it is my regularly used adhesive, so it is part of my standard workflow. I know the clearance I want and plan accordingly.

Regardless of the brand name on the handle, there will always be a price difference between the quality brands and the cheaper poorly made imitations

Saving money on tools

Question: I'm new to woodturning and am smitten. I want to start buying my tools but find everything so expensive. Why is everything so expensive? Recommendations on how I can save some money?

Answer: Congratulations on beginning your journey. I'm sure you'll find it very enjoyable. As for why everything is so expensive, I can give you many reasons but, in short, quality does command a higher price. You can certainly buy lesser-quality tools, but I recommend against it. Of course, there are many additional costs that you can avoid. Some mark-ups by merchants are higher than others and obviously excessive, glossy advertising is costly – and guess who ultimately pays for it?

That said, buying quality tools once and enjoying them for a lifetime is a goal. Should you decide to exit the hobby/craft sooner, quality tools will bring a far better resale than lesser-calibre tools.

To save money I can give you these recommendations. Buy only what you need as a very basic kit depending on your initial interests. Whether a spindle or bowl turner and whatever size of work, you'll only need a few tools to accomplish it. Get those basics and skip the rest for now. Avoid the packages of everything in one box – you'll get stuff you don't need, don't need now, or that won't be to your liking when you do get there. Don't be ashamed to buy used tools. Other than ruining the temper on old-style carbon steel tools, modern high-speed tools and beyond can't be permanently damaged by ugly grinding. There is a lot of money to be saved buying tools that are used but still have plenty of life left. My best advice is to have a trusted turning friend help you pick out and negotiate appropriate pricing. They can keep you in quality brands with sizes and types you'll need now at a fair price.

Send your questions to Kurt's email: kurt@kurthertzog.com