Making small wooden balls with a sharpened pipe

Here's one just for fun. Small wooden spheres can be used as a decorative element in wooden or glass (or ceramic or stone) bowls on display or just tossed at random on a table. Such balls can be plain or decorated by woodburning. They can be given as favors or carried in your pocket and used in a manner similar to worry stones or as Baoding Balls (Chinese Exercise Balls). You can also use them to make jewelry. Their other potential uses are limited only by your imagination. Sure, you can buy cheap ones at a craft store, but the joy comes in making your own with your own custom tool. Spheres are difficult to turn with a skew (unless that happens to be one of your specialties), but here's a trick that will help you make them perfect every time.

Start with a piece of steel tubing or pipe with an inner diameter slightly smaller than the size(s) of the balls you want to make. For starters, we're talking something on the order of, say, a third to two thirds inch. After you get some practice on small ones, you can go bigger. Sharpen and hone the end of the tube completely around the circumference at a relatively steep bevel, say 30 - 45 degrees, with the inside diameter being the sharp edge. Chuck up an appropriately-sized stick of hard, fine-grained wood with some interesting color or pattern. Use your favorite spindle tool to create a crude bead on the end. Go in with your new steel tube tool, using it like a scraper with as full contact as possible, and gently rough out a sphere by swinging the tool from side to side on the tool rest. The important thing is to make sure the ball stays bigger than the diameter of the tube. If the ball gets to be the same size as the tube, it will get sucked in with disastrous consequences. When it gets as small a diameter as you want, or as small a tenon as you dare, part it off and make some more in the same manner. When you get a pile, you can smooth off the nubs with sandpaper.

According to one source, this technique was published by Mike Darlow in one of his books and called a "tube gouge", even though it is really a scraper. It was apparently also shown in *Woodturning* #50 March 1997, p.4. It was brought to light more recently on the WoodCentral forum by John K. Jordan (not *the* John Jordan) at www.woodcentral.com/cgi-bin/turning3.pl?noframes;read=178042 . Some examples of his work can be seen there.

John reports that once you get going, these are very quick and easy to make. Among other things, he reports learning the following tips:

*The cutting edge on the tube needs to be as smoothly honed as possible, otherwise it will put scratches on the sphere.

*After first attempting to sharpen in on a grinding wheel, he chucked the tube up on the lathe, and while it was spinning, he ground the bevel with a rotating sanding disk. He cleaned up the inside of the tube with a round file and then honed with a diamond hone. He sharpened both ends so he could switch when one end got a little dull.

*It worked a little better if he rotated the tube (around it's long axis) while working it back and forth over the surface of the sphere.

Unfortunately, I'm not aware of any high-speed steel pipe, so you'll have to hone or resharpen reasonably often.

I don't know what the size limit is – it's a good think to experiment with. I would like to make some larger ones up around an inch or two. The thought crossed my mind that one of the so-called "vacuum gouges" (www.cleanturn.net/details.htm) might be perfect for making larger balls. These are HSS and also available at Penn State Industries (www.pennstateind.com/store/lcind.html), although the price kind of defeats the purpose unless you have one laying around or intend to use these balls professionally. I saw one for sale on eBay, but the price unfortunately went above my limit.

Give it a try, and give us some feedback. Bring some in for Show & Tell. I would love to see and feel them.

Always use common sense. Things that work in one situation may not work in another.
Follow all Safety Rules. If it feels wrong, it probably is; stop and rethink.
***Y**our **M**ileage **M**ay **V**ary*