



# Chatter and Catches

the Newsletter of the



April 2010



## President's Gouge

Our last meeting was a big success. I want to thank Wayne Ferree for the use of his meeting room. We had 13 members in attendance, had a new member join - welcome Don McRoberts - and had an individual who saw our CVW sign on Stephanie Lane and stopped by. Marc Hiscox is a fine furniture maker who is having problems with his spindle turning, e.g., bed posts, lamps. He was very excited to know that there was a woodturning group in the valley. He asked if there was anyone in the club who could help him with his turning. Paul Cote has agreed to get together with Marc and see if he can provide assistance. Marc also indicated an interest in joining the club.

Don McRoberts, who has developed and maintains several websites in the area, has offered to assist the club in developing a website. We are taking Don up on his offer, and in the near future we should have something up and running. We will be calling upon members to provide information for the website.

The show-and-tell program was a big hit. It was very exciting to see what club members had been working on, and the techniques they used for turning and finishing their items. The presentations resulted in numerous questions and I believe all were answered. The exchange of information was excellent, and I picked up several helpful tips that I will be incorporating in my work. It was very exciting to see what some of the newer turners have been able to accomplish. Several of the members reiterated what I have previously stated that if it were not for this club, several of us would not be turning at this time. This speaks volumes for the members of the club who are so willing to share.

We discussed during the meeting and reminded club members that the Chili Cook-Off is coming on April 24-25. We are asking each club member to donate at least one item to the club for sale at the cook-off. Several members have already donated items. Special thanks to Gary Hathaway who took the perfume atomizers that the club purchased last year at the Utah Symposium and turned them for the club. Gary also took several pen blanks that I won at the auction and turned pens for the cook-off. Also a special thanks to Wayne Porter and Bill Draper who rough-turned several bowl blanks and brought them to the meeting. Dave Mills and Wayne Allen each took a blank and will finish them for the cook-off.

We **will not** be holding a regular meeting in April. Our April meeting will be the Chili Cook-Off Craft Fair on April 24-25 at the Carson Valley Inn. I believe that setup will begin between 7:30 and 8:00 AM each day. If you are not planning to attend but have items for the club to sell, they can be dropped off at my residence at 1318 Toiyabe Ave., Gardnerville, or at my work at Conway Communications at 3370 Executive Pointe Way, Suite 40, Carson City. If you have items and cannot drop them off, let me know and I will pick them up.

Another special thanks to Wayne Allen who built an additional plexiglas screen so that we can have two turning demonstrations at the same time.

I look forward to seeing all of you at the Chili Cook-Off Craft Fair. - John Compston, President

## Speed Kills

Always be aware of your lathe speed and the quality of the wood you are turning. While turning a 12 inch platter four years ago, I broke my left arm and could have been killed or permanently injured.

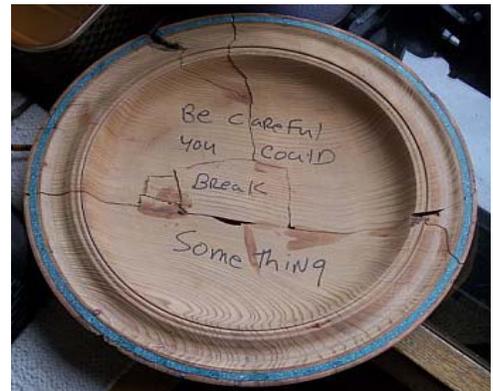
Looking back, what went wrong was the use of poor quality wood and improper lathe speed. A friend gave me an old redwood burl table. I'm always frugal and telling people that I'll take any old wood you don't want and turn it into something of beauty. Looking at the table, I thought I would make a large serving platter, so I cut a round out and mounted it up for turning. During the turning process, cracks kept showing up and I did my usual patch trick of saw dust and CA glue and continued the turning process. After I had it roughed out, I set it aside to turn a pepper mill.

My lathe speed turning the pepper mill was between 1000 to 1500 rpm. After finishing, I removed the pepper mill, re-mounted the platter, and turned on the lathe. I did not consider that I had just had the lathe running at high speed. My lathe is not a variable speed lathe, so whatever speed you were running previously is where it starts. Anyway, after about one or two seconds, the platter literally exploded hitting me in the arm just above the wrist. It was the most painful thing I have ever experienced. After walking around in circles for about five minutes holding my arm, I realized it was broken because every time I let go of it, it hurt like crazy. I was wearing a long sleeve tee shirt and a lined over-shirt so I started to roll back the clothing fearing a compound fracture, but I was in luck. The skin was broken and bleeding but no bone showing.

Kathy, my wife, wasn't home at the time, so I drove myself to the clinic. Sure enough, I had a broken arm, and lost the summer: no golf for 2 ½ months; chores put off; no turning; golf course mowed with one arm.

What went wrong? They say when turning, your lathe speed should always be between 6000 and 9000. It's not really rpm. It's just a reference number. The calculation is lathe speed times diameter of the piece you are turning.  $1000 \times 12 = 12000$ , so the platter was spinning between 12000 and 15000. Ouch! The other problem was the cracks I kept filling and gluing. After examining the broken pieces, the platter had separated along some of these glue lines.

Some turners talk about the kill zone when turning: that's where you stand between the headstock and tail stock and do your turning. If the piece comes off, chances are you will get hit. I am now always aware of that, so whenever possible, I try to work in such a way so if something happens, I might not get hit. It works great in theory, but sometimes you just have to get in there and do your thing. A fact about turning is that you are always going to have catches, and sometimes have pieces come off the lathe. The best turners in the world will tell you to wear your face shield, dust mask, watch out for loose clothing, and always keep a presence of mind when you are working around the lathe.



It took me a week to find all the pieces of the platter. I glued them together, and the platter sits with all my other turnings to remind me of that fateful day. - Dave Mills

## Skewed Points

There have been several discussions at our recent meetings regarding safe lathe operating speed. It was stressed that one should start at low speeds, especially with an out-of-balance piece, and work your way up to a safe, faster speed.

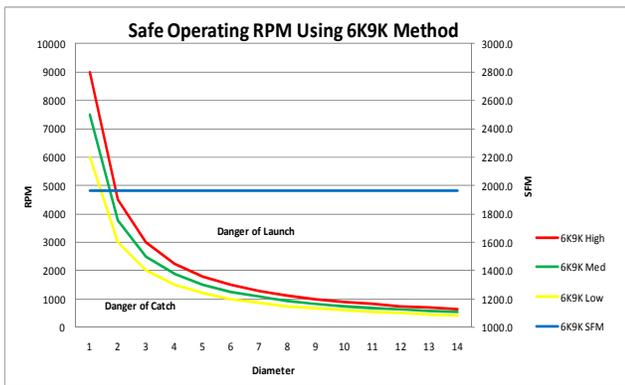
OK, so what is a safe, faster speed? Some turners suggest that the charts shown in various books written by prominent professional woodturners are adequate. The charts I have found seem to have been derived empirically, have no apparent mathematical basis, but seem to be safe. These charts also include reductions in speed as the piece thickness increases. The methods described below do not consider thickness. (Note that these methods assume that the piece has already been rough-turned to a round, balanced condition at low speeds.)

Other turners suggest that the method found in the Craft Supply catalog is a good one, and it seems to have a wide following. A quick web investigation finds many uses of this method. So, what is this method? I refer to it as the 6K9K method. It uses what I call a ‘figure of merit’ for a starting point into which a turner divides the diameter of the piece to derive revolutions per minute (RPM) for setting the lathe speed. While noting again that one shouldn’t start a lathe at the highest speed, I suggest starting at the low end of this 6000 - 9000 range.

Still other turners suggest that the speed of the piece at its outermost diameter is what one should carefully manage. This is called surface speed, and is given in surface feet/minute (SFM). It is a mathematical calculation based on RPM and diameter (D) using the formula at the right.

$$SFM = \frac{(\pi \cdot D \cdot RPM)}{12}$$

Interestingly, there is a relationship between the 6K9K method and the SFM method, and it is shown in the chart below. (Note that the smaller diameters are improbable due to lathe speed limitations, but are included for clarity.) Using the 6K9K range limits and a midrange point, I calculated and plotted the RPM values from 1” – 14” diameters (yellow, green, and red lines.)

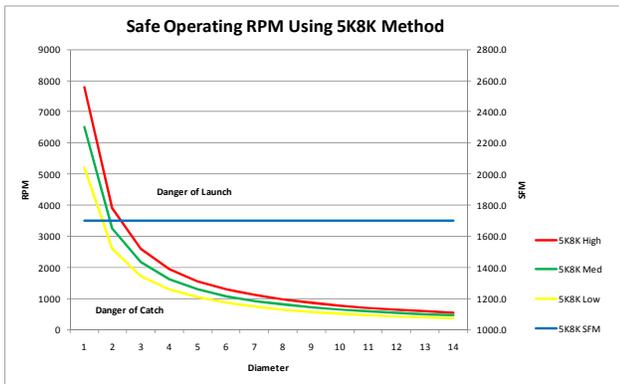


Using the math for the SFM method, I plotted the SFM at the 6K9K midrange point for the same diameters (blue line).

You can see that as the diameters increase in size, the RPM necessarily decreases, but the SFM remains constant.

Which method should you use? In practice, the 6K9K method is much easier to use because it is a less-involved calculation, and it will always result in a constant SFM within a certain range.

At this point we can ask ourselves whether these calculated speeds are safe. Looking at the RPM values, some would say they are too slow. Perhaps. Looking at the SFM values, a noted local machinist (Ron Burdg) considers them to be on the high side. Considering the SFM values were calculated at the mid-range K value, the SFM at the redline must be even higher.



While investigating the on the web, I found a professional woodturner in videos on YouTube who professes a slower 5K8K method. I believe I agree with both Ron and the turner on the video. The chart for the 5K8K values is at the left, and the SFM value is reduced by almost 150 SFM.

So, what is too fast, and what is too slow? Only you can ultimately decide. Some professional turners send people scattering from the front row at their demonstrations when they start their lathes at high speed with an unbalanced piece.

Other professionals create long, arced ribbons of wet wood powered by their high lathe speeds. Speeds that are too slow can result in more catches, and speeds that are too fast might result in launches for distance records, or much more seriously, in a broken arm as chronicled earlier in this newsletter.

Perhaps the ultimate answer to the quest for speed is to loop back to the beginning of this article and to utilize the charted empirical knowledge of professional turners until you develop your own safety groove through your own years of experience. – Bill Draper

## Wants and Disposals

FOR SALE: Wayne Porter and Dave Rich have large and small walnut blanks for sale. Contact them at the next meeting or call Dave at 775-265-3099.

## Dates to Remember

The Chili Cook-Off Craft Fair will be held April 24–25, 2010, at the Carson Valley Inn. The CVW will have a booth where we will provide turning demonstrations and offer our creations for sale.

Super Wednesday at Craft Supplies USA will be held May 5, 2010 at their location in Provo, Utah. The sale opens at 9:30 a.m. For more information, visit their [web site](#).

The Utah Woodturning Symposium, which will be held May 6–10, 2010, is the longest-running woodturning symposium in the world. The year 2010 marks the 31<sup>st</sup> anniversary of the event. Participants can select from over 100 demonstrations given by some of the best woodturners in the world. For more information, visit the [symposium's web site](#).

Nick Cook, a nationally known woodturner, will be at the Nevada Woodchucks club for demos and hands-on instruction May 11–13, 2010. The costs for the full-day demo and hands-on session are unknown at this time, but will be announced when finalized. Check out Nick's work on his [web site](#).

The AAW 24<sup>th</sup> Annual Symposium will be held June 18–20, 2010, at the Connecticut Convention Center in Hartford. For more information, go to [http://www.woodturner.org/sym/all\\_symposia.cfm](http://www.woodturner.org/sym/all_symposia.cfm).

The Greater Vancouver Woodturners Guild is presenting the 2010 West Coast Roundup, An international Woodturning Symposium featuring world renowned instructors & authors, in Vancouver, B.C., on September 10–12, 2010. Alain Mailland, Art Liestman, Nick Cook, Michael Hosaluk, Graeme Priddle, Marilyn Campbell, Jason Marlow, Dale Larson, will give demonstrations and lectures on all aspects of woodturning. More information is available on the [Guild's web site](#).

The Woodturners of Olympia (WA) are presenting the Creativity in Woodturning Symposium 2010 at the Komachin Middle School, 3650 College Street, Lacey, WA, on July 24<sup>th</sup>, 2010. The packed one-day program includes demonstrations and discussions by Alan Lacer, Bill Luce, and Dave Schweitzer. More information is available at <http://www.woodturnersofolympia.org>.

## Newsletter Editor's Request

Please send your newsletter contributions and suggestions for improvement to Bill Draper via [cvwnews@charter.net](mailto:cvwnews@charter.net) no later than Monday of the week before the next meeting. The submission deadline for the May 2010 newsletter is April 26th.

## CVW Meeting Location and Directions

There will not be a regular CVW meeting this month. Instead, we will be participating in the Chili Cook-Off Craft Fair on April 24–25 at the Carson Valley Inn. Details are provided in this newsletter.

### Carson Valley Woodturners' Officers

**President:** John Compston – 775-782-3542

**Vice President:** Dave Rich – 775-265-3099

**Treasurer:** Wayne Porter – 775-265-7887

**Secretary:** Dave Mills – 530-694-2565

### Resources

The Carson Valley Woodturners wish to express our appreciation for the support provided by generous vendors. Please visit their stores and web sites for your woodturning and woodworking needs.

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