Maineiac Woodturner

Monthly Newsletter of the Maine Chapter of the AAW

Volume 1, Number 4, January 2001

President's Message

I trust you all had a Merry Christmas and a Happy New Year. Despite the lousy weather and a somewhat light turnout, everyone seemed to have a good time at the December meeting. I personally think having the wives there for our Christmas meeting was an excellent idea. The next meeting will put our own Vice President in the spot light. Pete will demonstrate how he makes these wild natural edge creations of his. After you see this demo you'll want to see more of his work at the gallery in Bath (sorry Pete, I can't remember what Island Gallery it is.) that is if all his work isn't all sold out. I'll be on the hook for the bring back raffle. Be sure to bring wood auction and show and tell items. There should many latter as I know we all got plenty of new tools for Christmas and are just dieing to try them out.

Work Safe,

Bob

In this Issue

Club Officers

President	Bob Hackett 633-6232	**Librarian**	Mark Irving 443-2337 irvings@javanet.com
Vice-Pres.	Peter Asselyn 353-4206 asselyn@banet.net	**Treasure**	Robert Morell 725-2212
Newsletter	Kieran Kammerer 622-1946 shkrtrds@ctel.net	**Auctioneer**	Peter Asselyn

Club Business, December, 2000

Due to the holiday party, very little club business was discussed at the December meeting. Bob did review the results of the member survey with those present. Members who responded to the survey were most interested in learning about bowl turning followed by artistic/sculptural/hollow form turning. Further down on the list were practical/mechanical demos followed by spindle turning demos. Member's likes about the club included demos, fellowship, newsletter (thanks) and the sharing of knowledge. Significant dislikes included talking during the demos (possibly the drafting room could be used as a place to talk during demos) and the long winter drive to the club meetings. Members suggested more entry level demonstrations and also were interested in more hands on learning. Additional suggestions included some skew and spindle turning and more visibility to the general public. The last suggestion was to attempt to get more involved with other chapters. Thanks to all who replied and I know Bob, Peter and the rest of the club officers will be taking the suggestions/recommendations into account when planning this year's club schedule.

Kieran

Holiday Party

As always, a great time was had by all. The food was excellent and the fellowship superb. It was nice that some of the member's significant others were able to attend and we all were quite happy to hear that Steve Gleasner is going to be a dad sometime in the month of April. This only came to light after Steve's wife had to repeatedly remind him that he could not demonstrate in April due to a prior commitment. Steve obviously chose a very loving and understandable wife. We all wish them well in this new endeavor and pending Steve's ability to cope with chronic sleep deprivation, he should be our featured demonstrator sometime in May.

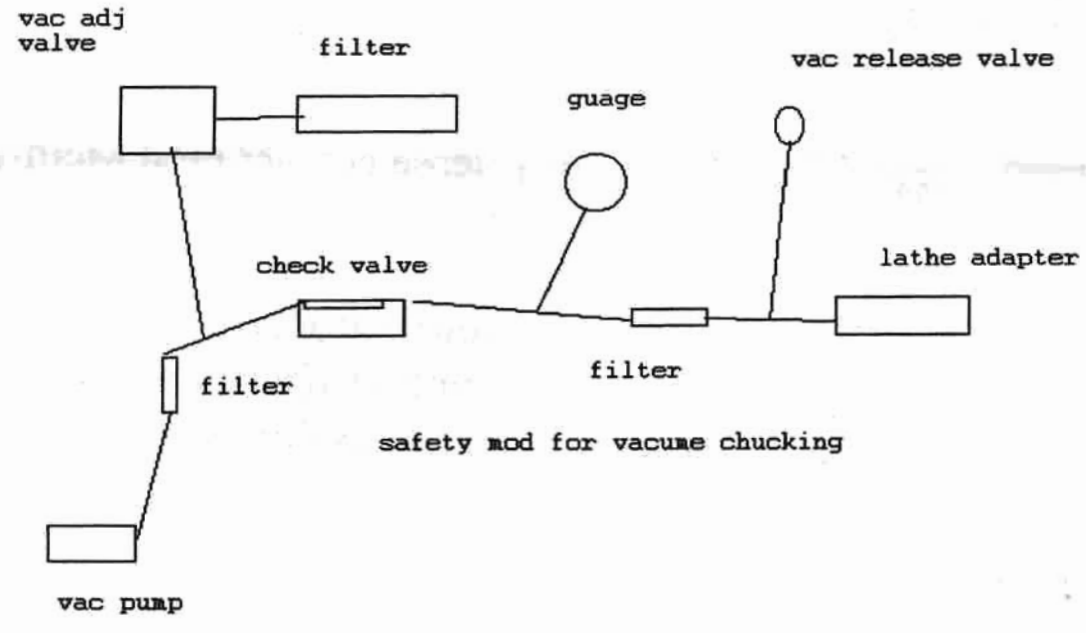
The Yankee swap was a great success and enjoyed by all who participated. Although somewhat slow at first, the later stages brought some significant strategizing and several lucky people left with Lancaster, Clapp and Hackett originals. One of our relatively new members, Joyce Hanna, was the proud and quite pleased recipient of one of Rene's sharpening jigs. I know I am already looking forward to next year's swap.

Bring Back Raffle

Bob Hackett was the lucky winner of December's bring back raffle. The item was a replaceable tip scraper brought in by Tom Raymond. Bob assures me that he will be providing a very desirable item for January's raffle. Please plan to bring your holiday cash and support your club.

Turning Tip

This month's turning tip is provided by our own Peter Asselyn. Peter lives where there are frequently short losses of electrical power. Obviously when he is turning and using his vacuum pump, such a loss could be catastrophic to both Pete and his bowl. In order to avoid a sudden loss of vacuum pressure, Peter has ingeniously designed a check valve system that prevents such a sudden loss of vacuum pressure. His system consists of a check valve in the line which should be placed as specified in the drawing below. To extend the life of your vacuum system, Peter also recommends the addition of several line filters. With the check valve in place and the system up and running, Peter reports that he can sustain vacuum pressure for about thirty seconds after the loss of electrical power. Obviously this is a tip which will help to insure the safety of our work pieces as well as our own safety.



Epals

Peter asked me to include the email address of Chris West, a retired woodturner in England. Peter notes that Chris would love to communicate with any turners from the club. I am sure he could give us some interesting insights into woodturning in England. Chris can be contacted at westwoodturnery@beeb.net. Peter hopes some members will take advantage of this new contact.

Meeting Schedule

2001 promises to be an excellent year with many of our members willing to share their time and expertise to make each of us better turners. Remember that unless otherwise noted, meetings begin at 7:00 P.M.

- **January 17th, 2001**

The 2001 year will begin with our own Peter Asselyn demonstrating his approach to turning natural edge pieces. All of us who know Peter, know he is never afraid to try a new design or take a fresh approach to turning pieces. There should be something for everyone.

- **February 21, 2001**

This meeting will focus on making tools and scrapers. Bob Hackett will be demonstrating brazing techniques and Rene Pomerleau will be sharing his knowledge of tool making. Further details at the Jan. meeting.

- **March, 2001**

Jacques Vesery has agreed to do a day long Saturday workshop. The workshop will take place at Erskine and the final details (date, time, etc.) are still being worked out.

Meeting Schedule (continued)

- **April 18th, 2001**
  Jeff Clapp - TBA

- **May 16th, 2001**
  Steve Gleasner - Sphere Turning

Classifieds

For Sale:

Baldor 1140 RPM, 120 volt motor. 3/4 HP. Great for lathe or grinder. Please contact Fred McIntyre.

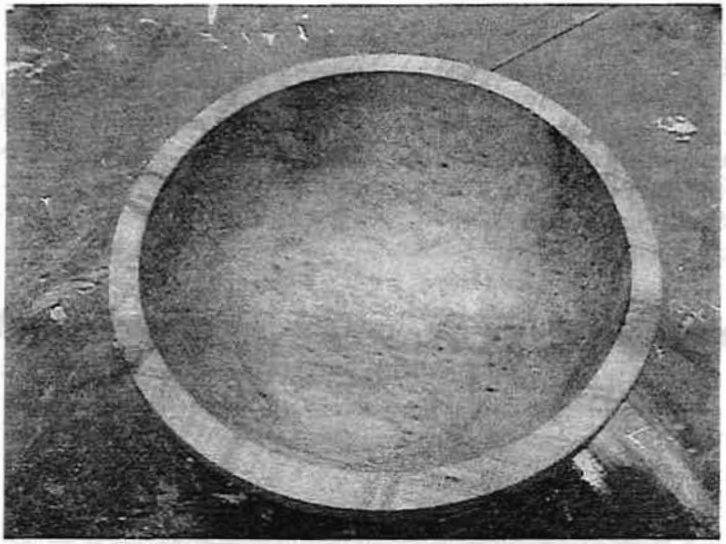
Your Ad Here. Please Contact Kieran with any Classifieds.

Wood Auction

Please bring any and all wood for auction at next meeting. Peter is anxious to generate money for the club. It's never too early to plan for next season's gifts.

Show and Tell, Dec., 2000

Unfortunately due to a minor crash of my picture editing program, most of the pictures I took at last month's meeting were lost or destroyed during the editing process. I was able to salvage one picture from the show and tell and that was of a maple bowl by Bob. For those of you unable to make the meeting, Jeff Clapp brought in several spectacular turned Christmas ornaments and wooden bracelets and Mark Irving brought in a beautiful turned vessel with a nice, tight fitting lid. I apologize about the loss of pictures and plan to always make duplicate disks before I try to edit my pictures. Some holiday party pictures were saved and those are also included below.



Maple Bowl, Bob Hackett

Bob and Burt checking out the Yankee swap goods.

Reducing Timber Drying Defects by Boiling

By: Steven D. Russell
Eurowood Werks Woodturning Studio
The Woodlands, Texas

In the summer of 1999, several of my Internet woodturning friends urged me to begin a comprehensive series of timber drying tests. My goal was to reduce drying defects to the absolute minimum and to discover faster and more efficient ways to accelerate the drying process. This is the first in a series of articles profiling the results of my continuing drying tests with bowls, platters and hollow forms.

This report covers "plain paper bag drying" and pieces that were "boiled, then bagged". Future articles will cover freeze drying, microwave drying, live flame drying, dry heat assisted drying, steaming, vacuum drying, solar kilns and supplemental treatments. These include alcohol immersion baths, mineral spirit immersion baths and Pentacryl immersion baths.

Boiling Experience:

I first started experimenting with boiling approximately three years ago. At the time, I had a supply of green Madrone Burr in my studio. This burr is quite unstable when it is green. Drying defects typically include severe cellular collapse, gross deformation, numerous checks and corrugation. With a supply of the burr in stock, I began to experiment with ways to reduce the drying defects by boiling. The procedure was a tremendous success. From then on, I would periodically boil timbers that were susceptible to significant drying defects. Last summer, I began a large scale-drying test with several local timbers.

Paper Bag Drying Experience:

I have been drying my rough outs in paper bags for almost two and a half years. I have become quite fond of the plain paper bag drying method. It is a significant time saver after a long day roughing out production bowls. It is quick, cheap and I have had good luck with it using a variety of timbers. However, there are certain times when other methods will work better. It really depends on the characteristics of the piece at hand.

Test Overview:

In March of 2000, the first group of four hundred and fifty bowls and platters were removed from drying production. All of these bowls and platters were dried in paper bags. Some of the rough outs were boiled for one hour and were placed into paper bags without end grain sealer. The balance was placed into the bag straight off the lathe, without end grain sealer. The species included in this analysis: Maple, Walnut, Mulberry, Sycamore, Pecan, Winged Elm, White Ash, Flowering Plum, Bodark, Sweet Gum, Black Ash, Cottonwood and a few others.

Subject Pieces:

I chose to include some marginal pieces in the test (those with branches or rims very near the pith), because I like to "push the envelope". I usually make my chainsaw cuts to clear the pith, any checks and the smallest growth rings. This leaves a bit of turning stock from the center section, so it is not wasted. However, on smaller logs there is precious little room to do this and still get a nice size bowl.

Therefore, I began experimenting with making a single cut, directly through the pith. This offered minimal waste and gave the largest possible bowl blank (unless bandsawn). However, the small growth rings next to the pith are very prone to splitting during traditional air-drying. (The small growth rings in the test pieces that were boiled, remained intact).

Immature or overgrown branches (I call them "branchlets") are another thing that has challenged me over the years. Most of the Sycamore pieces in this test came from trunks that were approximately 30"-32" in diameter. Sometimes, these immature branches will dry intact, but most of the time they do not. They tend to shrink and

loosen when they dry and at times, even fall out. Liberal doses of thin CA will help, but even CA will not save them all. (All of the boiled test pieces that contained branchlets dried successfully and remained tight in the timber.)

The Procedure:

An open pot is used for boiling, but you can also use a pressure cooker. A pressure cooker will reduce the overall boil time considerably. The problem is getting a large enough pressure cooker to hold your bowls! Whatever you decide to boil in, use a pot that you can dedicate to timber boiling. The extractives in the timber will quickly make a mess of your boiling pot and you will not want to use it for anything else.

In the past, I boiled my rough outs with a full rolling boil for the entire boil cycle. I found out that this was not necessary and just wasted propane. Those Cajun cookers can really burn the fuel! Now, I bring the pot up to a boil and place the bowls and platters into the "soup". I boil most of the items for one full hour, under a low to medium boil (not a simmer, not a full rolling boil). You must monitor the pot to insure it does not boil dry. Periodically, you will have to replace some of the water lost during the boil. You can also cover the pot with a lid to help retain heat, water and conserve fuel. The boiling water may slosh out and stain some surfaces, so take precautions to insure that you have suitable protection.

Some of the smaller items may require a weight to prevent floating. A brick or a large rock works great for this. In unusual circumstances, I will boil for two hours if the piece warrants more time. However, all of the items in this particular test were boiled for approximately one hour. When I remove the pieces from the pot, I let them air dry overnight to reduce some of the excess water and bag them the next day.

In extreme cases (like green Madrone Burr), put the items into cool water and then bring it up to a boil SLOWLY, over the course of two hours. When the water begins boiling (2 hours from the start), boil for two to three hours. When this cycle is up, (4-5 hours from the start) turn off the burner and let the piece sit in the pot until the next day. Then, remove the items from the water and air-dry them for one day before bagging. However, most timbers do not require this extra effort.

Sometimes, the design will limit the amount of pieces you can put in the boiling pot. For example, semi enclosed bowls, hollow forms or tall roughed out vases etc. However, I load as many pieces as I can fit in the pot. You can load quite a few platters into the pot, because they stack so well.

Deciding When to Boil:

Does the piece include branchlets in the sides/bottom? Is there wild grain on one side and straight grain on the other? Is the rim/bottom of the bowl near the smaller growth rings (closest to the pith)? Is the species well known for gross distortion or cellular collapse during drying? Does the species exhibit "honeycomb" degrade or severe corrugation when dried? If so, then I would suggest you augment your "plain paper bag" method (rough out placed in the bag without alteration of any kind) with a boiling cycle. Here's why...

The Results:

Of the four hundred and fifty bowls and platters included in the analysis, the largest amount of drying defects were in the plain paper bag test group. The least amount of drying defects were in the boiled, then bagged test group which had little to no drying defects (splits, fissures etc.) and exhibited significantly less gross distortion, warp, twist or other undulations in the test samples. Species with the largest amount of defects present when turned were Sycamore and Pecan, followed by Sweet Gum. For example: Several of the Sycamore and Pecan pieces had branchlets in the sides or bottoms of the test pieces.

Of the twenty bowls in the plain paper bag test group containing these branchlets, sixteen showed splits through the branchlets. Most of the splits were limited to the diameter of the branchlet in twelve bowls. The four remaining bowls had splits that extended well past the branchlet boundaries. All of the branchlets received an initial application of thin CA glue before going in the bag.

Twenty -one bowls and five platters in the boiled, then bagged test group revealed NO splits in any of the branchlets. Gross distortion on the rims of the bowls and platters was significantly less on the boiled pieces as well. They still warped a bit, but the overall rate was significantly less than the plain paper bag tests group.

Other comparisons demonstrated similar results. Twelve Black Ash bowls contained heartwood (wild grain) and sapwood in the same piece and were boiled, then bagged. These showed significantly less gross distortion than the plain paper bag test pieces. All of the Black Ash test pieces that were boiled, then bagged had no splits. Of the ten pieces in the plain paper bag test group, two revealed minor splits.

Bowls turned with rims or tops very close to the pith also exhibited similar results. Of the forty- five bowls and twelve platters in the boiled, then bagged test group, only one bowl contained a split. Of the forty bowls and fifteen platters in the plain paper bag test group, thirty-one of the bowls and twelve of the platters exhibited numerous split defects at the rims.

Summary and Advantages of Boiling:

This testing clearly demonstrates that the addition of a boiling cycle helps to prevent or eliminate many common drying defects. For me, I plan to boil, then bag much more often! I will reserve the plain paper bag method for pieces whose grain character and overall defects are within the demonstrated success profile. Other pieces that exhibit various defects or possible grain/growth ring compromises will get a "hot water bath".

I have also found that boiled timber dries up to twenty-five percent faster than non-boiled timber. Another advantage comes when you sand the piece. Species that tend to clog the sandpaper when traditionally air-dried, offer little to no clogging when they are boiled. In addition, most unwanted guests are eliminated in the boil cycle. This is especially important if you dry your bowls inside your home and you want to stay out of divorce court!

It is clear that boiling does have benefits for marginal, as well as sound pieces. It is my guess that the boiling process relieves or relaxes much of the internal stresses. The area around the branchlets on dry (boiled) pieces was very tight and showed no separation from the surrounding timber. I believe that the combination of the heat and hot water loosens the lignin bond between the cell walls. The internal stresses then relax a bit while boiling and when the piece cools, the lignin bond "cures" (for lack of a better word) in the new relaxed state. Wild grain and other defect prone areas are therefore, brought under control.

Most of the platters in this test were crotch pieces and the feathers on the boiled pieces were tight and free of checks. By contrast, the plain paper bagged pieces did contain some minor checking in the crotch feather areas. Even very thin platters (3/8" thick) showed very little rim movement in the boiled samples. By contrast, the non-boiled group had some pieces that looked like a potato chip!

Final Thoughts:

Some turners say that the reason they do not like to boil is the inherent color loss. In my experience, the outer 1/16" or so WILL loose color, but below that, the color is unaffected. I have carefully compared the color in air dried and boiled pieces many times. In my opinion, there is no detectable difference between color, shading or tone values in boiled timber and that of traditionally air-dried timber. If your rough out is only 1/8" or less in thickness, you have a valid point regarding color loss.

However, on a 12" bowl with a wall thickness of one inch, the point is mute in my opinion. Obviously, nothing works in every situation, with every timber. I would encourage you to try boiling some of your problem bowls and platters before bagging them. The process is easy and relatively quick and offers amazing results. If you have any questions, please do not hesitate to contact me via e-mail at benzer@flash.net. Best wishes in all of your turning endeavors.

Steven D. Russell is a professional woodturner, demonstrator and turning teacher. His studio Eurowood Werks, is located in The Woodlands, Texas USA. He specializes in bowls, platters and hollowforms with unique surface treatments. He can be reached via Email at: benzer@flash.net

Reducing Timber Drying Defects by Boiling - **Part 2**

By: Steven D. Russell
Eurowood Werks Woodturning Studio
The Woodlands, Texas

Many woodturners who read my initial report on *"Reducing Timber Drying Defects by Boiling"*, have requested more information on how long it took for the various timbers in the test to reach equilibrium moisture content (EMC). In addition, many have asked for guidelines on how long it will take for other boiled timbers to reach EMC, after they are bagged.

Nearly all of my rough outs are dried indoors, in a controlled environment that is heated and air-conditioned year round. When the blanks have reached EMC, they are moved outside and stored in a part of the studio that is not temperature controlled. The dried rough outs remain in the post-drying staging area of the studio, until they are selected for final turning.

Most of the four hundred and fifty pieces in the boiled vs. bagged test, reached EMC in approximately two to three months. Some took a bit longer, depending on the species. On average, boiled rough outs will reach EMC approximately 25% faster than traditionally air-dried and bagged pieces. Timbers included in the boiled vs. bagged test included: Maple, Walnut, Mulberry, Sycamore, Pecan, Winged Elm, White Ash, Flowering Plum, Bodark, Sweet Gum, Black Ash, Cottonwood and a few others.

Unfortunately, there is no ***"rule of thumb"*** I can give you for determining when various boiled rough outs will be ready for finish turning. There are just too many variables to give a hard and fast rule. I can tell you, that your boiled rough outs WILL dry 20-25% faster, than non-boiled timber. I have heard from turners who indicate a reduction in drying time even greater than 25% on their boiled pieces. However, I can only personally attest to a reduction of up to 25%.

Many variables influence the length of time required for boiled timbers to reach (EMC). These include, but are not limited to the particular species, the wall thickness/uniformity of the piece and the percentage of post-boil free/bound water contained in the subject piece. In addition, the length of time the blank is allowed to air dry before it is placed in the paper bag, can impact the time required to reach EMC.

Other variables include the average EMC for the area where you live, the ambient humidity of the drying room, the amount and velocity of any cross-ventilation (either a/c or heat) in the drying room and the average ambient temperature of the drying room.

In my studio, I do not use a moisture meter to determine when the blanks are ready for final turning. I rely on close visual observation in the shape of the tennon boss. When the boss is sufficiently oval, it is ready to give it a go. In four years of turning, this system has never let me down. It does however, require a substantial knowledge of the particular timbers drying characteristics.

Currently, I have over 1,500 rough outs that have reached EMC and are ready for finish turning. Having a constant supply of dried bowls coming out of drying production is invaluable for a production turner. Obviously, not every turner can maintain such a large store of dried rough outs. We all want to have bowls dried on demand! Few of us care to wait the several months necessary, for nature to take its course.

Therefore, last summer I decided to embark on a comprehensive series of timber drying tests. My goals are: 1.) To

lute minimum. A significant challenge, but one that will hopefully illuminate this subject and uncover new ways to dry timber efficiently and successfully.

In my next phase of timber drying tests, I will cover Pentacryl treated timbers and timbers that are dried from the green state in a microwave oven. Microwaving can significantly speed up the drying process and yield excellent results, if proper care is taken. Over the last three years, I have had excellent results with microwaving various timbers. Using my proven process as a starting point, I intend to *"push it to the limit"* to discover how fast I can dry a bowl, without any drying induced degrade.

Pentacryl is a liquid compound of siliconized polymers that can help to reduce drying degrade and speed up the drying process. I will test several methods of applying the Pentacryl including, soaking, brush on, spray on and vacuum assisted infusion. The results of Phase-2 timber drying testing (Pentacryl treated and microwave drying) will be published in a future issue of "More Woodturning". Phase-3 testing is scheduled to cover freeze drying and live flame curing. As always, I remain available for any questions you may have concerning this or any other turning related topic. You may reach me via E-mail at benzer@flash.net or snail mail at Eurowood Werks Woodturning Studio, 22 Thornbush Place, The Woodlands, Texas 77381-6250.

Editors Note: Steven has very kindly allowed me to include this information in this month's newsletter. Any of us who enjoy surfing the web and looking for woodturning information, will readily recognize Steven Russel as an extremely well informed turner who very frequently contributes a wealth of turning info to several of the woodturning sites. Subscribers to Woodturning magazine will also recognize this info as being in the December edition of Woodturning . Several of his articles on waxes/finishes have also appeared in earlier Woodturning magazines. Steven is more than willing to answer questions on drying and would also appreciate feedback on any of our results. All my thanks to Steven for his willingness to share his information and for allowing me to include it in our newsletter.

Kieran

Member News

I am quite pleased to announce that several of our members have been making a name for themselves in the turning and publishing worlds. Jack Vesery has recently had several pieces accepted for top collections. One piece entitled, "Set My Spirit Free", received a Purchase Award from Celestial Seasonings: A Loose Interpretation V. Jack's approach to the piece was the feature of an article he wrote for the last American Woodturner magazine and the piece is now part of Celestial Season's permanent collection.

Peter Asselyn was also a featured writer for the turning paper More Woodturning produced by Fred Holder and published out of Washington State. Peter's article was about natural edge turning and will be available during his January demonstration.

Thanks to Jack and peter for making the Maine Chapter of Woodturners that much better. And to think, we actually get these guys for free.