IWG News

The Newsletter of the Island Woodturners Guild June 2022

About the IWG:

The Island Woodturners Guild meets from 1:00 - 4:00 PM on the 4th Saturday of each month (except for July/Aug) at the Central Saanich Senior Citizens' Centre, 1229 Clarke Road, Brentwood Bay, BC.

Visitors are welcome.

Executive Committee

President:
Tim Karpiak

Vice President:
Don Robinson

Secretary:
Michael McEwan

Treasurer:
Peter Pardee

Member at Large:
Hovan Baghdassarian

Member at Large:
Virginia Lee

Member at Large:
Marlene Speckert

Past President:
Steve Werner

Newsletter Editor:
John Kilcoyne

The IWG gratefully acknowledges the support of the following companies:
Artisan Wood to Works
Chipping Away
Industrial Plastics & Paints
Island Blue Print
KMS Tools
PJ White Hardwoods
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THE PRESIDENT'S TURN

Wow, another Guild year is ending. It's been a challenging year, but I think our guild has managed to weather it well. We've gone from Zoom only meetings to in person meetings and back and forth. And through it all we've still been able to make things at the lathe.

As you know we had our annual general meeting last month. A new executive was formed with many of us returning to our past positions. I would like to welcome Don Robinson to the role of Vice President as well as Hovan Baghdassarian to the member at large position. Continuing on the board will be Peter Pardee, Mike McEwan, Virginia Lee, Marlene Speckert and Steve Werner. I don't know how next year will look like but I'm sure we'll meet all the challenges.

Hopefully we'll get some warm weather soon and between yard work and BBQ's we can all spend a little time in the shop.

I hope everyone has a great summer! I look forward to seeing all the completed projects in September. See you all at the meeting.

Tim Karpiak

NEXT MEETING (HYBRID): SAT. JUNE 25: 1:00 p.m.

Note: The next meeting will be **in-person** at our meeting hall in the Saanich Seniors Citizen Centre in Brentwood Bay. Masks are optional and those who wish to wear them are encouraged to do so. It will also be **available on Zoom**.

The topic will **ORNAMENAL TURNING AND ROSE ENGINES.**

John Kilcoyne will offer a slide presentation on the nature and history of this form of turning as well as the specialised lathes used to create them.

Following this, Mike Neal will demonstrate the operation of his homemade ornamental lathe which was inspired by a 19th century Rose Engine (left) widely considered to be the finest ornamental lathe ever made.

We will then have our regular **Show and Tell.** If you are unable to attend in person, please forward photos of your turning(s) to Virginia (remoteva@gmail.com) no later than Wednesday June 22nd. Alternatively, you could try to use your computer camera to show your turning from your home.

FYI: FUTURE MEETINGS

Your (sort of new) Executive has already begun organizing our sessions for next year. The following is the line-up to date.

SEPTEMBER

Craig Timmerman (www.armadillowoodworks.com) will offer a remote demonstration on turning a Torus Vase.

OCTOBER

Gil Heise will offer an in-person demonstration turning various Xmas ornaments which will include using his amazing jigs.

NOVEMBER

Tod Raines (https://ntrwoodturning.com/) will offer a remote demonstration on Turning a Bowl in a Bowl.

JANUARY

Donna Zils Banfield (https://livealifelessordinary.com/) will offer a remote demonstration of various techniques including pyrography, airbrushing and sgraffito.

THANK YOU!

We all owe a debt of gratitude to the following members who have stepped up in one form or another. In no particular order, thanx to:

Hovan Bagdassarian for agreeing to serve on Executive (and more).
Don Robinson for agreeing to serve on the Executive.
Gil Heise for agreeing to provide a demonstration next October.
Bill Munden for agreeing to take photos of Show and Tell.
All those members who show up early to help with the set up.

These are in addition to the following members who have agreed to continue their volunteer efforts:

Andre Robin who is our facilities co-ordinator and liaison with the Senior Citizen's Association.
Barrie Baptie who is the emcee of Show and Tell (and preeminent model of men's suspenders).
And Tim Karpiak, Virginia Lee, Mike McEwan, Peter Pardee, Marlene Speckert and Steve Werner for their continued service on the Executive.

BUT…..

Our continuing reliance on remote demonstrations, means we still need volunteers to assist with the Audio/Visual setup. Four members have already indicated that they are prepared to help out as part of an A/V crew: Hovan Bagdassarian, David Blair, Tim Karpiak and Harvey Pfluger. If we can get 5 more volunteers, it will mean that no one will be required to assist at more than 2 meetings next year.

*(Lest you think this too onerous, consider that for almost **a decade**, our facilities coordinator André Robin has attended **every meeting** arriving at noon to unlock the doors and reorganizing the tables and chairs and then remaining until 5:00 p.m. in order to restore the tables and chairs and lock up the facility)*

No A/V knowledge is required. Tim Karpiak is going to prepare a short instruction sheet and is going to colour-code the cables to the camera and computer equipment to simplify the setup.

Please contact Tim if you are willing to help out.

MAY RECAP

Tim Soutar gave an excellent presentation on finishing with an emphasis on surface preparation and an overview of various finishes. He emphasized that there are various approaches, and he was only offering his personal preferences. The following are the highlights.

(Some of the following information is taken from a presentation by Vik Peck which can be found in the June 2020 Newsletter.)

I. SURFACE PREPARATION

Tim began by noting that while the choice of finish often attracts most of the attention, the significance of this issue pales in comparison to the critical importance of surface preparation. He illustrated the point by handing out 4 small turnings which represented various stages in this initial process. The improvements in overall appearance were striking.

A. Hand Sanding

While Tim primarily power sands his turnings, there are occasions when hand sanding is required. In such cases he uses *Norton ProSand* which he purchases in bulk (LV: 20 sheets/$17-19). An aluminum oxide abrasive, it has a fibre-reinforced backing and a stearate coating which minimizes loading.

While he indicated that Abranet and Astrodot are probably superior products, they are very expensive and in the case of the latter, difficult to find.

He uses a simple jig with a hacksaw blade to cut the paper in two lengthwise and then each of these pieces in two again. Each of the six pieces can then be folded to provide a number of fresh faces.

B. Power Sanding

1. Equipment

a. Drill

While any electric drill will work, like most turners, Tim uses a 90-degree angled drill which offers better ergonomics. (Cdn Tire: $70)

b. Sanding Pads

Tim uses backing/sanding pads from *Vince's WoodnWonders* (https://vinceswoodnwonders.com/) (US$4/5). Typically, he will use 3" pads on the outside and 2" pads on the inside of a bowl.

To prolong the life of the backing pads, he also uses "disposable" interface pads from the same source (US$2.50)

(*For more information on these pads, see the note in the May 2022 Newsletter*.)

c. Sandpaper Disks

While you can purchase pre-cut disks in a variety of grits, they are relatively expensive. Tim prefers to use Swiss-made SIA sandpaper sheets with a Velcro backing (KMS: $1.49). Designed initially for use in autobody work, they measure 2.75" x 16.5" and will yield at least 6 smaller pieces for mounting on pads.

***Note**: Many turners cut the disks oversized to provide softer abrasion at the edges.*

2. Technique

a. Starting and Finishing Grits

Tim noted that the starting grit will hinge on one's turning expertise. Despite his many years of turning, he frequently begins with 120 grit. New turners will often need to use 80x or even 60x. It makes no sense to spend 15 minutes sanding with 120x when 80x will do the job in 5 minutes. Sandpaper is a tool – use the best tool for the job.

He rarely sands past 320x unless he intends to apply a high gloss finish.

b. Counter-Rotation

Despite Glenn Lucas's approach, Tim prefers to follow the following practice which is recommended by most North American professionals.

For your starting grit, the lathe should be in the forward position (counterclockwise) with the drill rotation set in the opposite direction (clockwise). This will produce a more efficient sanding action as well as minimizing the inevitable scratches.

If your lathe has reverse capability, when you move up to the next level grit, turn the piece in reverse (clockwise) with the drill set in the opposite direction (counterclockwise). Each grit will produce very faint concentric marks and following this procedure will help to remove the preceding marks.

If your lathe does not have reverse, alternate using hand sanding in the reverse direction with the lathe off.

c. Speed

Avoid high speeds on the lathe and the drill. These will create an "air cushion" which will prevent the abrasive from doing its job. More importantly, they will produce heat which can quickly degrade the sandpaper, potentially harm the sanding disks, and may cause micro-fractures in the wood surface.

While there is no perfect speed, many sources suggest starting with a lathe speed of 250 and a drill speed of 150 rpm and then modifying these with experience.

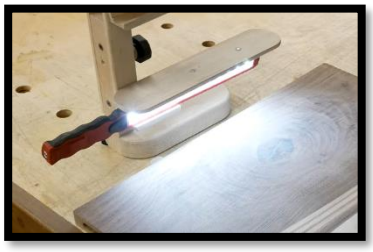
d. Pressure

Avoid the temptation to apply heavy pressure when power sanding particularly with coarser grits. It will produce heat, more quickly degrade the sandpaper, and will simply produce deeper scratches. A firm but light touch allows the sandpaper to do its job.

e. Raking Light

Before changing grits, you must ensure that you have removed all scratches. Patience is required to avoid that sick feeling when you finally apply a finish only to have it highlight the scratches.

In most cases, you will not be able to see scratches – only a shadow at the bottom of the scratch. To do so, you need to turn off all overhead lights as these will simply illuminate the bottom of the scratches hiding them from view. Then you will need to use a raking light which simply means a light source that is angled across the surface to reveal any shadows.



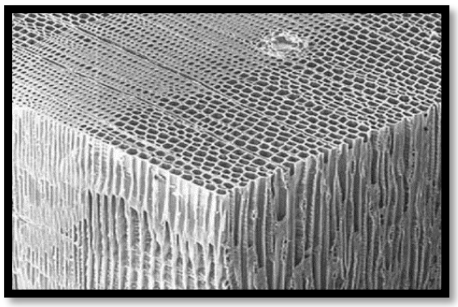
f. Clean between Grits

Inevitably some abrasive particles will break off from the paper and be deposited on the wood surface. These must be removed using either compressed air or a rag before moving on to the next grit. Otherwise, 120x particles will still be producing “120x scratches” when you are using 180x.

g. Raising the Grain

While Tim does not use this technique, he noted that some turners do.

By way of explanation, wood consists of a series of microscopic hollow cells which run vertically in a tree. A 1” cube consists of approximately 5 million of these tubes or “straws”. Regardless of how sharp your tools are, cutting on **end grain** will almost always tear the cell walls. The same result will occur on side grain if your tool is not sufficiently sharp, or your sandpaper is dull.



Applying water to wood will cause the torn cells to swell leaving a rough surface when it dries. If you intend to use a water-based dye, stain, paint or finish, you can minimize this by sanding the piece to 220x and then applying a "coat" of water. Even if you are using an oil finish, some turners adopt this procedure claiming it will produce a better surface on end grain.

There is no need to flood the piece – a wet paper towel will suffice. Once it has dried, you should resume sanding at 220x before proceeding through subsequent grits.

Note: Do not use denatured alcohol as it will evaporate before the fibres have swelled.

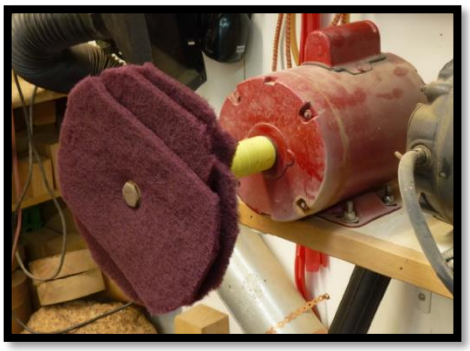
h. "Rough" Buffing

As the final step in surface preparation, Tim uses a unique approach: he buffs his pieces using 3M Scotch-Brite pads.

An alternative to steel wool, these are made of non-woven polyester fibre with a coating of abrasive that is secured to the fibres with resin. As the grit is distributed throughout the pads, they are a long-lasting and, at $2 (KMS) for a 6" x 9" pad, a very economical abrasive.

While he primarily uses the Maroon pad (#7447), he does occasionally use Light Grey (#7448) and White (#7445). While it is impossible to precisely compare pad grits to sandpaper, 3M offers the following assessment:

White:	1200 – 1500 grit
Light Grey:	600 – 800 grit
Maroon:	320 – 400 grit



Tim mounts 4 pads on a threaded bolt with fender washers between each pad and a washer and nut on the end and then installs the assembly on a separate motor.

Alternatively, you can mount the unit on your lathe.

If you own the Beall Buffing system (discussed below), you can assemble the pads on a full-threaded 3/8" bolt which will fit the Beall mandrel.

Alternatively, you could simply epoxy the bolt into a wooden spindle which fits your 4-jaw chuck.

Cautions

1. He observed that new pads can transfer colour to the turning which means you must break them in using a piece of junk wood.

2. To avoid airborne objects, you must keep a firm grip on the turning as the pads may catch.

Sanding a Green Turning

With green wood, the common approach is to "twice turn" which means that the piece is rough turned to a consistent over-thickness, stored until it is dry and then turned to the final form. However, Tim will frequently turn green wood to final form which raises the issue of how to sand wet wood. For many years, he would use foam-backed SIA sandpaper or Abranet. However, the resulting slurry would fill any scratches which would only be visible once the piece had dried. Accordingly, he now uses a hair dryer or heat gun to dry the surface of the turning and then uses regular sandpaper as discussed above.

Words to Sand By

… treat sandpaper like toilet paper. Use it once and toss it. Sandpaper is a cutting tool and needs to be sharp to work effectively. I plan on going through 2 discs of each grit on every bowl. (Brad Adams)

II. FINISHES

Tim noted that there are two general categories of wood finishes: penetrating finishes (oils) and surface or film finishes (varnish, shellac, lacquer).

WHICH ONE?

There are clearly some important "dos and don'ts" when it comes to selecting a finish. You should never use a film finish on kitchenware. A water-based finish should never be applied over a water-based dye (unless there is an intermediate coat of shellac). Nor should a film finish be applied over a product with wax. And so on.

However, when it comes to visual and tactile considerations as well as ease of application, the choice is far less important.

Tim passed around 4 small turnings each of which had a different finish: Wipe On Poly (WOP), Danish Oil, Tung Oil and Osmo Hardwax. By eye and touch, it was difficult if not impossible to determine which was which.

In fact, many members indicate that they have a "go to" finish which they use almost exclusively. A random survey discloses the following finishes which they report they use over 90% of the time:

Rick Bailey:	Equal parts BLO, Zinnsers shellac and denatured alcohol
Barrie Baptie:	LV Polymerized Tung Oil (bowls)
Graeme Evans:	Mohawk Tung Oil
Gil Heise:	Equal parts Circa 1850 tung oil and Varathane 1000 semi-gloss
Mike Neal:	WOP
André Robin:	WOP (decorative items) and Mohawk Tung Oil (bowls)

Similar to Tim's offerings, you would be hard pressed to distinguish between these various finishes on their turnings. Adopting a "go to" finish means that they are aware of any idiosyncrasies and become very proficient in their application. So, the implicit message that he offered to new turners is "*don't sweat the choice*".

A. Penetrating (Oil) Finishes

Introduction

While the selection of finish will ultimately depend upon the intended use, he generally prefers to use oil finishes. They are easy to apply (and refinish), produce a natural looking finish, highlight or "pop" any figure in the wood, remain flexible when cured and have low or zero VOCs.

Note: Tim avoids oil finishes that include wax. While noting that many turners like these products, he prefers the finish he can obtain by buffing wax-free oils.

Drying Oils

Chemists classify oils as "non-drying", "semi-drying" and "drying". Only naturally drying oils should be used and those most commonly used in woodturning are tung oil, linseed oil and walnut oil. They all cure or polymerize naturally through a chemical process in which the components crosslink by oxidation rather than evaporation of a solvent.

1. TUNG OIL

Tung oil is perhaps the most popular "drying" oil for turners and is available in pure or polymerized form.

a. Pure Tung Oil

Used for over 2,500 years, tung oil is famous for its natural look, longevity, durability, and easy repairability. 100% pure tung oil has no solvents or driers, is impervious to mold and remains flexible when cured. While it does impart a slight honey-colour to most woods, (which many find attractive), there is no yellowing or darkening thereafter.

Pure tung oil is available from Lee Valley ($29/500 ml). It is a house-branded product made by noted manufacturer Sutherland Welles.

Pure tung oil can take up to 48 hours to cure. To speed up the process (and provide better penetration), many manufacturers including Sutherland Welles suggest cutting the first coat with 50% mineral spirits. While he has not been able to try it yet, Tim suggested that a better alternative is citrus solvent.

Note: Citrus Solvent

Citrus solvent (aka D-Limonene) is colourless and consists of citrus peel oil extracted from the peel of an orange (98%) mixed with a small amount of water (2%). While it has long been used in cleaners/degreasers, pure citrus solvent is becoming increasingly popular as an alternative to more toxic solvents such as mineral spirts and turpentine.

Citrus solvent is different from citrus cleaner/degreaser. Do not use the latter in any finish.

The only B.C. supplier I could find is Greenworks in Vancouver and it is relatively expensive ($28/500 ml.) Tim is hoping to make a trip to *Spirit Lines Skin Boat Store* in Anacortes WA. https://shop.skinboats.com/Cirtrus-Solvent-100-pure-organic-D-L100.htm which offers a quart for only US$19.

b. Polymerized Tung Oil (PTO)

As noted above, polymerization simply refers to the process by which drying oils cure. As pure tung oil can take a few days to cure, many manufacturers offer polymerized tung oil (PTO). This involves a specialised heat-treating process which "jump starts" the cross-linking and leads to overnight curing. However, as this process thickens the product, most polymerized tung oils are mixed with a thinner (typically mineral spirits) to aid in application and penetration.

Lee Valley offers two PTO products both of which are also made by Sutherland Welles: PTO High Lustre ($74/litre) and PTO Sealer ($63/litre).

The High Lustre is 50% polymerized tung oil and 50% mineral spirits while the Sealer, according to one source, is 10 - 20% tung oil with the balance being mineral spirits and other solvents.

As the name implies, the Sealer is used as a first coat to seal the wood. Thereafter, you use different mixes of the Sealer and High Lustre products depending upon your desired sheen. 2 parts Sealer and 1-part High Lustre produces a low sheen, 1-part Sealer and 2 parts High Lustre produces a medium sheen and High Lustre alone produces its namesake. Each coat requires 24 hours drying time.

Note: Given the high cost of the Sealer ($63/litre) and the low cost of mineral spirits ($8/litre) – you may wish to consider purchasing only the High Lustre and thin it yourself.

Tips on Application

There are a few common suggestions made by on-line reviewers of these products. The first is to not allow any coat to sit for more than 10 minutes or it will become very sticky. Having said that, if a coat does become sticky, simply apply a bit more finish and then wipe it off immediately. The second is to apply thinner coats as you proceed since the wood will be increasingly saturated and the oil will not penetrate. The third point is to watch for "bleed back" which are puddles or bubbles near wood pores as the finish cures which must be removed before they harden. The fourth point is to always allow sufficient time for a coat to dry – ideally overnight.

c. Tung Oil/Varnish Blend: Mohawk Modified Tung Oil

This product, which is used by many members, is an oil/varnish blend which is often referred to by the generic title "Danish Oil". (Richileu: $45/qt)

It contains 10% tung oil, 25% resin and 50% mineral spirits. The high varnish content means that a little goes a long way, it dries very quickly and produces a harder finish than pure or polymerized tung oil. Successive coats provide increased sheen.

Users caution that you **must** rub off any excess finish before it dries.

d. Caveat Emptor

There are very few legal regulations governing the labelling of finishing products which means that manufacturers can use any label regardless of the contents. Hence, for example, *Minwax Tung Oil Protective Finish* contains no tung oil! It is simply a mixture of linseed oil and varnish. A more accurate label would read "*Minwax Protective Finish provides a finish that looks a lot like a Tung Oil finish*".

Similarly, there are products called *Teak Oil* which contain no teak oil but are simply regular varnish thinned with mineral spirits or mineral oil.

While it is tempting to suggest that you read the contents, the problem is that there is no legal requirement for manufacturers to stipulate benign contents and most refuse to do so on the basis that it is proprietary information.

2. LINSEED OIL

a. Raw Linseed Oil

Derived from flax seeds, raw linseed oil should not be used as it can take days or even weeks to cure.

b. Boiled Linseed Oil (BLO)

The term BLO dates from medieval times when raw linseed oil was boiled with lead oxide in a vacuum to produce a faster curing oil. However, despite retaining the name, most contemporary BLO products are not boiled but rather have metallic driers (e.g., cobalt, manganese, iron) added that accelerate oxygen absorption which speeds up the polymerization.

While it can be used as a component in a blended finish, it is not a particularly good choice to use on its own. Tim noted that on maple and other light woods it imparts a yellow/orange colour which will darken with age, it offers little or no water/vapour protection and is relatively inflexible when cured.

Nonetheless, if you want to use BLO you may want to consider Oli Natura. (Westwind Hardwoods: $44/1 litre). It is solvent free, contains no cobalt driers and is approved for use on children's toys.

c. "Double-Boiled"/Polymerized Linseed Oil

Health concerns regarding metallic driers have prompted a few manufacturers in recent years to offer **"double-boiled" or polymerized linseed oil**, which harkens back to the historic practice of heating the oil in a vacuum, but which contain no chemical driers.

Tim did note that these products are slower to cure than other drying oils, tend to darken the wood more and provide very little protection from moisture or abrasion.

Two of the more popular polymerized products are the *Danish Oil* and *Original Wood Finish* from *Tried and True*.

Both of these products consist of 100% polymerized linseed oil while the Original Wood Finish also contains beeswax. They contain no petroleum distillates, solvents or heavy metal driers and are food safe. (LV: $22 and $35/1pt)

Application: These products have received a bad rap from users who did not bother to carefully read the instructions. The crucial requirement is to apply **very very thin** coats. Given the high solid contents, the coverage is extremely high, and a pint will last forever. You can find more details here: https://www.triedandtruewoodfinish.com/resources/how-to-apply/

OB Shine Juice

Some Guild members like to use this homemade finish which consists of equal parts BLO, dewaxed shellac and denatured alcohol. A friction finish which is typically applied to the piece on the lathe at high speeds, it cures quickly and is less darkening than BLO alone. While the name was coined by a Captain Eddie Castelin who popularized this finish a few years ago, the original recipe dates back to the 1700's when it was first used in French polishing. In that process, the friction is caused by the rubber (pad applicator) being applied by hand. (Shellac has a very low melting point – it will start to soften around 120 – 140 degrees Fahrenheit.)

3. WALNUT OIL

A relative newcomer, most commercial walnut oils are heat treated to improve the rate of polymerization.

While there is relatively little scientific literature on walnut oil, some sources claim that it produces a somewhat clearer finish than tung oil i.e., it does not impart as strong a "honey" tone to the wood. Hence, if you want to "pop" the figure but retain the original colour of the wood, you may want to consider this product.

Another difference is that fresh tung oil has a relatively strong oil smell whereas walnut oil is described as having a "sweet" smell. However, this difference disappears once the finish has cured. It is also claimed that the shelf life of walnut oil is longer than tung oil, but I could not verify this. (The Forestry Forum suggests that both have a shelf life of 1 – 3 years and both will start to gel if exposed to oxygen.)

No matter how many coats are applied, walnut oil will only produce a matte finish. If you want a higher sheen, a wax finish can be applied once the oil has cured.

Note: Never use grocery store walnut oil as they contain additives which prevent it from curing.

LV sells 100% pure Walnut Oil ($43/litre). Their instructions call for a heavy coat to be applied and left to soak for at least 30 minutes. The excess is wiped off and left to dry for at least 24 hours. Additional coats are applied as needed.

Mahoneys Utility Finish

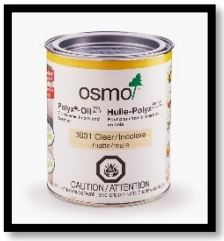
Noted bowl turner Mike Mahoney offers a range of walnut oil products, the primary one being the Utility Finish which is also 100% pure walnut oil. (Craft Supplies USA: US$18/16 oz.) This is marketed as a finish for salad bowls and kitchen utensils.

The only Canadian source I could find for this is Woodslee Summercraft. ($15/4 oz. plus shipping.) https://www.woodsleesummercraft.ca/product/mahoneys-finishes-canada/

4. HARD WAX OILS

Another relative newcomer from Europe, hard wax oils are a blend of natural vegetable oils and waxes. Some formulations also include mineral spirits. Originally designed as a flooring finish, they have a very high solids content. As such they offer excellent protection from water, alcohol and abrasion and are a particularly popular choice for tabletops. While they are expensive, Tim noted that a can will last a long, long time.

Osmo Polyx-Oil



This is a blend of natural oils (sunflower, soybean, thistle), waxes (carnauba, candelilla) and white (mineral) spirits (LV: $72/750ml).

It is safe for humans and animal when cured and meets current EU standards for use on children's toys.

Oli Natura Hard Wax Oil

This is a blend of various plant oils (including linseed and soybean), waxes (carnauba, beeswax) and mineral spirits. It does not contain any cobalt driers and also meets EU standards for food safety and use on children's toys. (Westwind: $75/1 litre.)

B. SURFACE/FILM FINISHES

Tim discussed only two film finishes that he uses: wiping varnish and lacquer.

1. Wiping Varnish

Oil-based varnishes provide a very durable gloss finish and are highly resistant to water and water vapour.

The most common form used by turners is wiping varnish which is simply a mix of oil-based varnish and mineral spirits. *Minwax Wipe-On Poly*, which is one of the most popular products, has a solvent content of 50 – 75%. Tim noted that this means it will dry very quickly and you should be prepared for this.

I

In a presentation a few years ago, Vik Peck noted that you can make your own wiping varnish for a fraction of the cost of a commercial product. She recommends a 1:1 mix of mineral spirits and oil-based polyurethane varnish. She also advised that you should apply relatively thin coats.

2. Lacquer

Lacquer consists of dissolved nitrocellulose and plasticizers in a mixture of various solvents. Available in an aerosol form, it comes in various sheens, dries very quickly (< 10 minutes) and provides an extremely durable finish.

Generally speaking, Tim uses lacquer in one of two circumstances. The first is where he wants to preserve the natural colour of the wood. Lacquer provides a very clear finish which does not alter the colour of the wood and will not yellow.

The second situation is where he has applied a dye and is concerned that any rubbing such as may take place with an oil finish, may adversely affect it.

His preferred product is *Krylon Matte Finish* (Michaels) which is a rattle can lacquer. As is the case with any aerosol finish, light coats are essential to prevent runs.

Another product to consider is Mohawk's *Finishers Choice,* which is available in gloss, satin and flat (Richilieu). While it is more expensive than *Krylon*, it has a higher solids content so fewer coats are required.

Safety: Lacquer contains a variety of toxic chemicals, and the danger is exacerbated when used in an aerosol form. While some of these have a low "smell" threshold, there are others which do not, which means even if you cannot smell them, they are in the air. For example, methylene chloride (carcinogenic) has a smell threshold of 250 ppm but toxicity starts in the under 1 ppm range. Ideally you should spray outside and at a minimum should use a chemical/cartridge respirator.

C. THE FINAL STEP: BUFFING

The final step in his finishing process is to buff the piece using very fine abrasives to produce a glass-smooth finish.

Fully Cured?

It is essential that the finish, be it oil or film, has **fully** cured before final buffing. For example, pure tung oil can take up to 4 weeks while the polymerized version may be as little as 1 week. Tim's approach is to store his turnings in a paper bag. When he opens the bag and cannot detect any odour, he is confident that the finish is ready for buffing.

The most popular system, and the one that Tim uses, is from Beall (https://www.bealltool.com/products/buffing/) The basic kit consists of three 8" buffing wheels, two abrasive compounds and carnauba wax. It also contains a quick-change adapter that will fit a 1/2" or 5/8" motor shaft.

While he mounts these on separate motors (1725 rpm for 8" pads and 3450 for 4" pads), many turners opt to mount them on their lathe. For this, you will need a #2 morse taper adaptor (LV: $15). As this will provide limited clearance from the headstock, many also purchase a 3" mandrel extension which will provide a total 6.75" reach. (LV: $28).

For buffing the inside of bowls, Tim also uses Beall Bowl Buffs which come in sets of three that are either 2", 3" or 4" in diameter. (LV: $57 – 61).

The 2 abrasives offered by Beall are white diamond (800 – 1000 grit) and tripoli also known as rottenstone (1500 – 1800 grit). Tim does not use the white diamond as he finds that the very fine particles can be trapped in the pores. Nor, as noted above, does he use the carnauba wax.

2022-23 DUES

The deadline for payment of 2022-23 dues is not until September 30th. However, every September Tim Karpiak and our treasurer Peter Pardee are faced with a flood of applications. If possible, it would be appreciated if you would renew your membership prior to September. Instructions for doing so can be found on the website at https://www.islandwoodturners.ca/membership-application/

PARTING OFF

Thanks to the members of the Executive and a special thanks to Tim Soutar for an excellent presentation.

CONCLUDING THOT