IWG News

The Newsletter of the Island Woodturners Guild September 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

Treasurer:
Peter Pardee

Secretary:
Michael McEwan

Members at Large:
Hovan Baghdassarian
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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
Richelieu Hardware

THE PRESIDENT'S TURN

Welcome back everyone. I hope everybody had a wonderful summer, did some fun things, and found some time to spend in the shop turning. I've talked to so many people who have told me that it seemed difficult to get into the shop. I can relate, but it seems that whenever I do, I always come out happy that I made the effort.

It's exciting to start a new season. I think we've got some great meetings ahead with something for everyone. We'll be trying to have all our meetings done in a hybrid format. That means we'll meet at the hall (even for remote demos) but we'll also be showing the meeting on Zoom for those that can't make it. As usual, any help we can get with setup and take down at the hall is greatly appreciated.

Our first meeting will be a remote demo from Craig Timmerman. I'm anticipating that it'll be very interesting and perhaps motivate people to try something new. We'll have a *"Show and Tell"* in person and on Zoom. If you participate on Zoom, please send Virginia pictures as soon as possible. I'm looking forward to seeing what's been made this summer.

I would like to welcome our new members. I hope you're excited about the new year and that you learn some new skills.

Speaking about new members, I had a couple of inquiries about the availability of mentors to help the newer turners. If you're interested in mentoring and would be willing pass on some tips and tricks please contact me or Virginia Lee (remoteva@gmail,com) and we'll update our mentors list. Thanks.

See everyone at the meeting on Saturday!

Tim

NEXT MEETING: SATURDAY SEPTEMBER 24: 1:00 p.m.

Our September meeting will feature a live remote offering by **Craig Timmerman** in which he will demonstrate turning a **Torus Vase**. It is offered in a hybrid format which means his presentation can be viewed in person at our regular meeting place or on Zoom.

The vase is turned on multiple axes and his demonstration will cover different holding techniques, useful jigs, turning air techniques and optional designs.

A turner for over 25 years, he has been a featured demonstrator at numerous events including AAW national symposia, SWAT, Utah and Rocky Mountain as well as numerous woodturning clubs. You can see more of his work at his site: www.armadillowoodworks.com.

This will be followed by a *Show and Tell*. If you are unable to attend, please forward photos of your work to Virginia Lee at remoteva@gmail.com no later than Wednesday September 21st.

HELP PLEASE!

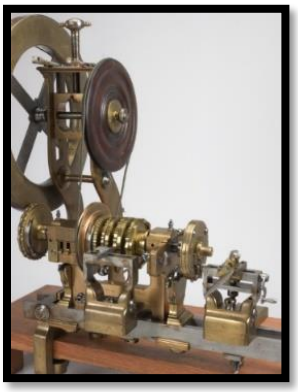
Our continuing reliance on remote demonstrations, means we need volunteers to assist with the Audio/Visual setup.

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

Start time is around noon.

JUNE RECAP

The June meeting featured presentations on ornamental turning using a rose engine. John Kilcoyne provided a historical overview of this form of turning followed by Mike Neal's demonstration of the operation of his homemade rose engine. The following are the highlights.



Ornamental turning is a centuries old practice of using a specialized lathe to embellish an item first turned on a conventional lathe. While there are a variety of ornamental lathes, the most sophisticated one is the rose engine.

A. A BRIEF HISTORY

The earliest records of OT date from the late 1400's and indicate that Germany was the site of most initial work. Martin Luther who was born in 1483 and is generally acknowledged as the "founder" of Protestantism made his living for a time as an ornamental turner in Bavaria.

As a hard material is required for detail, the primary woods were African blackwood, cocoa wood, ebony, and lignum vitae. For those who could afford it, the most popular turning material was ivory, and over time, ornamental turning was extended to embellishing various metals – notably bronze, brass and silver.

This small ivory box which dates to 1539 contains a portrait of Anne of Cleves – the 4th wife of Henry the 8th. The distinctive rose pattern on the lid, which was one of the most popular of the time, gave rise to the term *rose engine*.

As ornamental turnings became increasingly popular as gifts amongst European nobility, this gave rise to an increasing number of mathematicians and drafters involved in the design of ornamental lathes, highly skilled machinists in their production and of course ornamental turners.

In the early 1600's this form of turning was embraced as an appropriate past time for European royalty. It was said that the ability to produce such mesmerizing pieces of art was a testimony to their intelligence, refinement, and artistic sensibilities – and justified their elevated social standing. Well known turners included Maximilian 1 (left) and Emperor Leopold (right).

Ivory 1610

Ivory 1618

However, the most enthusiastic proponent was Peter the Great. A master of both conventional and ornamental turning, he built a large shop adjoining his castle in St. Petersburg which housed over 50 ornamental lathes.

The piece at left, made in 1718, was turned from curly birch with ivory inlay. It is one of only a handful of wood turnings that have survived from this era. The piece at right is an ivory snuff box that he turned in 1720 using an elliptical ornamental lathe.

OT was also an appropriate pastime for women. Notables included Catherine the Great and Sophia Magdalene Queen of Denmark. The latter's rose engine (right) reveals how these lathes were transformed into furniture and objects of art in their own right.

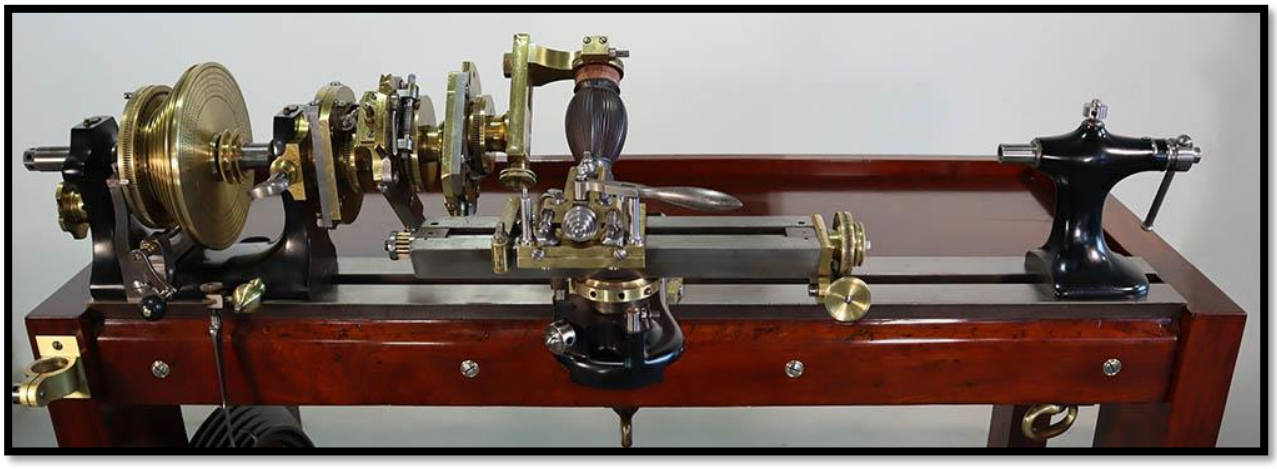
This trend was particularly evident in the lathe of King Frederick the Great (1740).

The next 200 years witnessed constant improvements in the design and operation of rose engines. These included a transition from hand wheels to treadles with flywheels and ultimately mechanical power (steam, oil combustion, electricity), adjustable slide cutters which allowed cutting on multiple axes, sophisticated elliptical and eccentric chucks, and increasingly complex cutting tools.

The Apex of RE

The finest rose engines were those created by the firm of Holtzapffel and Co. which was established in London in 1794. They featured an incredibly precise indexing system– accurate to 1/1000 of an inch as well as the use of high-speed rotating cutters to replace fixed cutters.

The lathe featured below was made in 1836 and sold for 1,850 pounds – the equivalent of $330,000 CAD today.



C. OTHER MEDIUMS

As noted above, ornamental turning was also applied to other commercial activities using different mediums.

In the case of metals, it was clock and watch makers who made widespread use of rose engines. Some of the most impressive designs on the backpieces of pocket watches were done by Abraham Breguet (1747 – 1823) whose world-famous watches are still in production.

The machine shown at left dates to 1772 and is the actual lathe that Breguet used. (Note the hand crank and flywheel).

While conventional lathes were widely used in the earthenware industry during the 1700's, it was Josiah Wedgewood who used a rose engine to decorate his Queensware line of pottery in 1763.

In one of the more unusual applications, a rose engine was used to create the dies on the printing plates for the Penny Black in 1840, the first adhesive postage stamp in the world.

The resulting pattern on the perimeter of the stamp was designed as an anti-counterfeiting measure. For the same reason, rose engines were also used in the printing of share certificates.

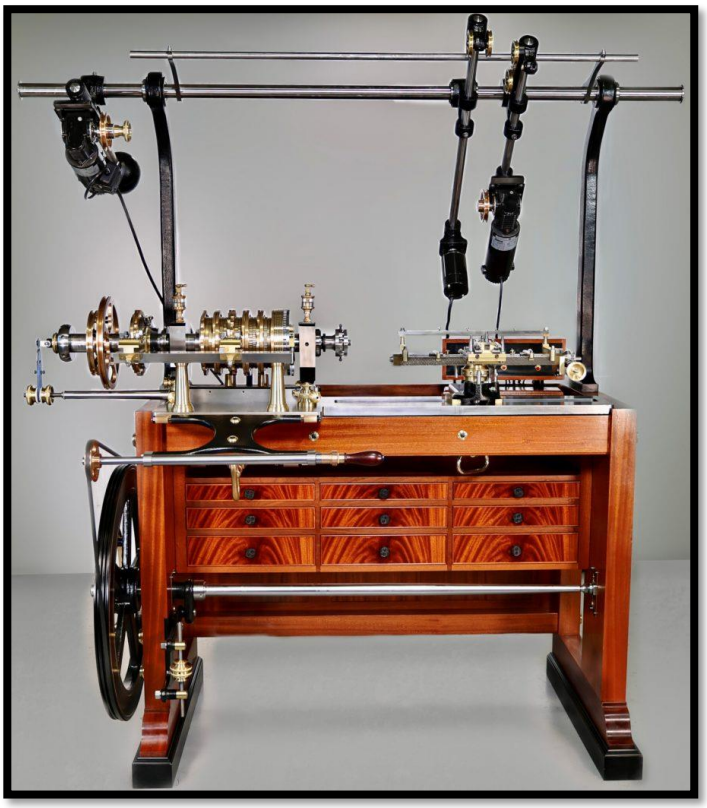
Finally, these machines were widely used in the production of Faberge Eggs. This piece (right) from 1890, was made of silver and then coated in enamel.

However, by the early 20th century, RE had been superseded by stamping methods and OT fell into disuse.

D. CURRENTLY

The past 15 years or so has witnessed renewed interest in ornamental turning and rose engines. There is an ornamental turning chapter of the AAW and a handful of manufacturers offer state of the art machines.

One of the more popular ones is the MADE Ornamental Lathe (below) which retails for an impressive US$140,000.



More general interest was spurred in 2007 when Jon Magill published an article in the AAW magazine on how to build a Rose Engine using a sheet of MDF and approximately $500 of parts (right). (You can find information on this project at https://mdfre2.colvintools.com/)

E. ROSE ENGINE OPERATION

The operation of a rose engine involves the mechanical interaction of 4 primary components:

1. A headstock mounted on pivots with heavy duty springs which enables it to rock or oscillate back and forth (perpendicular to the ways) and/or slide in a pumping motion (parallel to the ways.)

2. An array of rosettes or cams which have various cutting patterns milled on the edge.

3. A metal follower or "rubber" which tracks the outside edge of the rosette and in turn moves the headstock, and

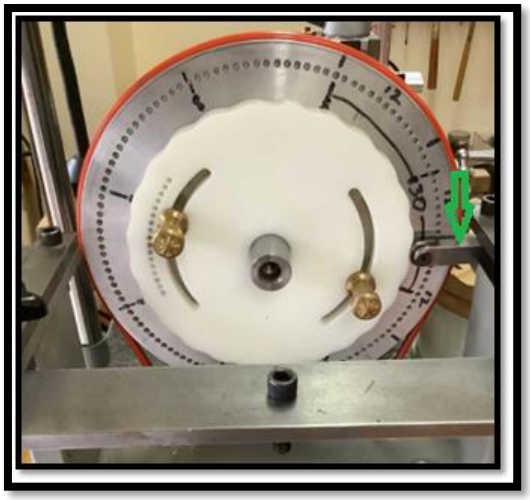
4. a range of different shaped cutters in a cross-slide rest.

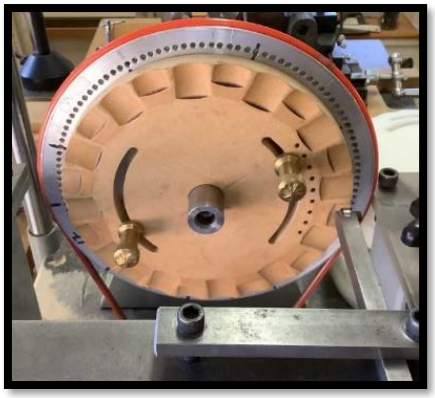
(For a short video of a rose engine in operation see: https://www.youtube.com/watch?v=SeqURQw3LUI)

F. MIKE'S ROSE ENGINE

Mike chose to build a modified version of the Magill unit using primarily metal components.

In the photo at right, the rubber (green arrow) which is locked in place is set to follow the pattern on the outside of the rosette. This serves to rock the headstock and the turning perpendicular to the ways. This is typically used to produce a pattern on the side of a turning.





In this photo, the pattern is located on the face of the rosette and the rubber located accordingly. The effect is to push the turning in and out parallel to the ways.

This is one of the many cutters that Mike fashioned. As apparent in the first photo above, it is secured in a fitting mounted on an XYZ vise and powered by an electric motor and drive belt. In conjunction with the movement of the headstock, it can produce a variety of patterns on a turning.

The above rosette and cutter were used by Mike to create this pattern on a box lid.

F. CURRENT OT TURNERS

The following are pieces by some of the better-known ornamental turners.

BILL OOMS

GORST DU PLESSIS

JOSHUA SALESIN

JON SAUER

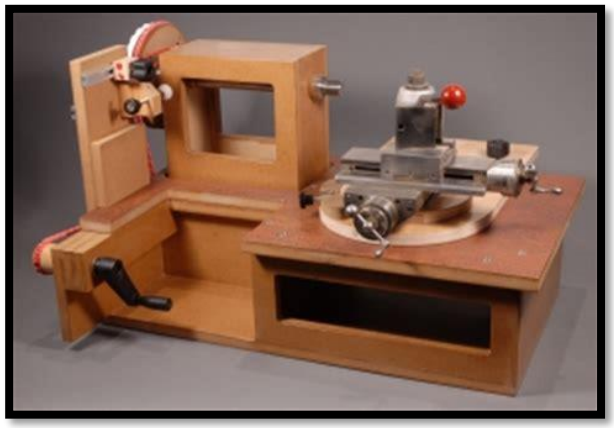
FOR SALE

MDF Rose Engine. As shown

Also with cutting frames, drive motor, and 8 to 10 UHMW Rosettes.

$500 or best offer. (I bought this for $800 and have never used it.)

Lin Bayford lorbay@telus.net



MEMBERSHIP RENEWAL: SEPTEMBER 31, 2022

Current memberships will expire on September 31st, 2022. To renew your membership, you need to complete the Membership Application/Renewal Form and pay the annual dues of $35 prior to that date.

You can complete the Application/Renewal Form electronically by visiting our website at https://www.islandwoodturners.ca/membership-application/. As indicated there, you can pay your dues either by e-transfer or by cheque.

Note: Every year, the President and Treasurer spend an inordinate amount of time tracking down people who want to renew but failed to do so in time and/or contacting individuals who completed the Form but forgot to forward dues payment. Please give them a break - they have enough on their plates without you adding to the workload.

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13 TIPS FOR TURNING A LIVE EDGE BOWL

Live edge (LE) bowls, also referred to as natural edge bowls, are distinguished by their undulating rim with a bark cap. They offer an attractive "flowing" form coupled with a unique visual tension between the smoothness of the body and the rough texture of the bark. While they can be challenging to turn, the result is worth the effort. This note offers some tips on turning these forms from various sources.

1. Green or Dry Blank?

Graeme Evans notes that there are pros and cons with each of these options.

A dry blank will be stiffer which means less flexing of the wings – an important consideration given the amount of air you will be turning at the rim - and it will be much easier to sand. However, with a dry blank there is a risk that the bond between the two bark layers (cork and phloem) and the cambium layer may have started to separate as the blank has dried (right)

(As discussed below, if the separation is minor, you may be able to secure the bark using CA glue.)

By contrast, a green blank will be easier to cut, and you have a much greater chance of retaining the bark. However, the softer wood means more flex, it can be difficult to make a finish cut after filling any voids or cracks and sanding will be more challenging. Moreover, in the case of a green blank you must ensure that you have sufficient time to complete it in a "single go". If left overnight or even for a few hours, differential drying will jeopardize bark retention as well as raising the possibility that the form will move out of round.

2. Harvesting the Blank

The best time to harvest green wood for a LE bowl – or for that matter any turning - is during the dormant season when the wood will have its lowest level of water. Less moisture means less shrinkage and thus less stress which can lead to the separation of the bark layers from the cambium. In Victoria this means roughly from October to April.

3. Bark Inspection

Always check the log/blank for signs of crushed bark which may have occurred when the tree was felled. In such cases, the prospect of retaining the bark is slight.

4. Thin Bark

While you can use any hardwood, as the barks are relatively brittle a thick bark can be difficult to maintain. Accordingly, for your first effort you may want to select a blank with relatively thin bark such birch, beech, or "young" maple. If you are a new turner, you might also want to select a blank (or size of turning) that minimizes the rim curvature which will mean less turning of air.

5. Appearance

For aesthetic reasons, if possible, use a blank which contains both sapwood and heartwood. This will emphasize the undulation of the form.

6. Preparing the Blank

The first step is to slice the log lengthwise.

The aim is to have the two high sides and low sides of the bowl at an equal height. While this will be relatively easy if the pith is in the centre of the log, the result is otherwise if it is offset (photo left). Accordingly, examine the end portions of the log to ascertain where the cut should be made to achieve this.

The longitudinal cut can be made using either a chainsaw or bandsaw. If the latter, bear in mind that a green log will be heavy and difficult, if not impossible, to keep stable on the bandsaw table. This can easily lead to the blade binding and snapping with potentially dangerous consequences. Accordingly, you should use a simple right-angle sled.

The log is attached to the jig using a few screws placed in the waste area. (*Photos: Rockler*)

With a cardboard or thin plywood disk secured with a nail in the centre line, rough cut the form at the bandsaw.

> ***Note**: Save the offcuts since you may need to use the bark on them to fill gaps on the final turning.*

7. Mounting the Blank

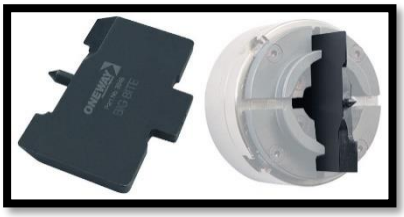
The blank is initially mounted with the bark side facing the headstock. As the bark is far too weak to support a drive centre, you need to remove it from the centre of the blank so that the centre is secured in wood. You can use a drill bit (Forstner or spade) or a chisel.

For safety, some turners recommend using a faceplate, especially for larger blanks.

However, using a faceplate will make it difficult, if not impossible to adjust the location of the tailstock so that the two high and low sides are in alignment once the blank is mounted. Accordingly, most turners prefer to use a drive centre and of these, most recommend using a two-prong rather than a four-prong drive. The four-prong tends to act like a drill in the wet sapwood and the two-prong makes it easier to make adjustments that may be required.

***Note**: There are several more "exotic" drives that you could use all of which have "outboard" prongs as well as a centre spur.*

These include the Oneway Big Bite (KMS: $20) which fits all Oneway chucks. However, at just under 4", it requires a large and relatively flat surface.



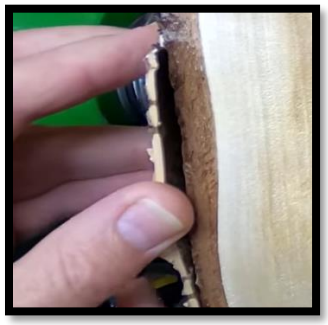
A better, though more expensive alternative is the Elio drive. Available in 3 sizes (2", 2.5", 3.5"), all three spurs are adjustable with the outboard spurs having a 5/8" reach. However, they are only available from The Woodturning Store in the U.S. (US$60 – 70).

For those who are so inclined, plans for a homemade precursor to the Elio drive can be found on the website of noted turner Al Stirt (http://www.alstirt.com/PDF%20files/NewBowlDriver1.pdf)

As noted above, once the blank is mounted between centres, use a pencil to see if the two high and two low spots are in alignment. If not, move the live centre in the tailstock to correct.

8. Turning the Outside

The normal practice is to turn the outside of a bowl moving from the base to the rim. As the wood fibres will be supported, this will produce a smoother cut and less tear out.



However, as the photo at left shows, doing so raises the possibility that you may "lift" the bark off the rim.

<u>Accordingly, at the rim you should always cut into the bark from the headstock end taking very light passes.</u>

9. CA Glue

CA glue is commonly used to reinforce bark to enhance retention. Some turners will apply a coat to the bark as a matter of course. However, as this will produce a high sheen which may distract from the finish, others prefer to only use it where there is cause for concern. In either case, you want to ensure that the glue does not penetrate the sapwood. It may discolour the wood and prevent penetration of an oil finish.

One option is to apply a coat of shellac (Zinssers Sealcoat) to protect the adjacent wood. Alternatively, or in addition, once a tenon is cut, you can rely on gravity by removing the turning from the lathe and placing it bark side down before applying light coats of thin CA glue.

Finally, most CA glues are clear which in wide gaps can produce a distracting "bright" spot. While adding sawdust can minimize this, you might also consider using Starbond medium CA glue which is available in both light and dark brown (as well as black) (LV $22.50)

10. Hollowing: "Hard Entry"

Once the blank is mounted in a chuck, you can hollow the form. The first cut at the rim will be a hard entry as there is no bevel support. This will be particularly challenging since you will initially be turning almost exclusively air.

As reported in the February 2022 Newsletter, for a hard entry in a conventional bowl, Gord Kifiak recommended that the gouge should be completely closed (flute facing 3 o'clock), the wood engaged using only the tip and once a slight "ledge" is created, advancing the tool while rotating it to open the flute.

In the case of LE bowl, a slight modification is required. The tool should not be rotated until you are no longer turning air. It is only at this point that you will have a stable ledge for a bevel supported cut.

***Note**: While some turners recommend making the initial entry with a parting tool, there is a danger that such a "blunt" cutting edge will tear off the bark.*

11. Hollow in Increments

Graeme recommends that you cut and sand the wings to completion in small increments (e.g., 1”). This will minimize flexing of the wings which would make it impossible to get a clean cut.

12. Sanding

If your blank is green, you should adopt Tim Soutar’s practice of using a hair dryer to dry portions of the bowl before sanding. As the residual moisture will tend to gum up the sandpaper, you might want to have a crepe block handy to clean it off. (LV: $15).

In any case, you need to take care when sanding near the bark edge as there is the danger that the bark dust will embed itself in the wood and permanently discolour it. To avoid this, you should consider sanding the bark edges by hand with the lathe off.

13. Finishing

If you plan on finishing your bowl with an oil finish, you should be aware that the oil will tend to dry on the surface of the bark rim producing a sheen that is much brighter than that on the rest of the bowl. While this is a personal decision, many turners find that differential sheens distract from the overall look of the turning. Accordingly, they avoid applying any oil to the bark.

For a good video by Mike Mahoney on turning a LE bowl, check out the following video: https://www.finewoodworking.com/2015/03/25/episode-5-natural-edge-bowl’

A LOW-SHEEN FILM FINISH

INTRODUCTION

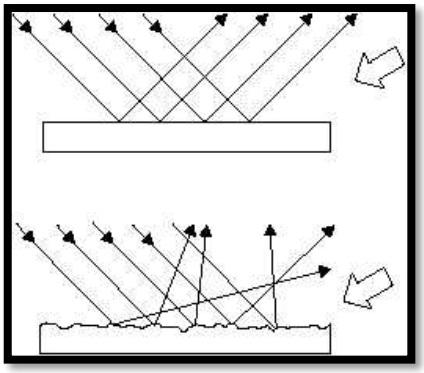
While there are certainly many types of turnings which look best with a high gloss finish, if *Show and Tell* is any indication, most members prefer a lower sheen, typically a satin finish. In most cases, this will be achieved using a penetrating finish such as polymerized tung oil, walnut oil, or an oil/varnish blend (Danish Oil). Within limits, you can enhance the sheen by buffing.

However, any oil finish will be relatively "soft" and there may be cases where the turning requires more protection (e.g., from water vapour or abrasion). In these circumstances, most turners will opt for a film forming product such as varnish, polyurethane, shellac, or lacquer.

To obtain a low lustre finish with these products you have two options. You can apply a gloss version of the product and rub out the finish or you can buy the product in the desired sheen.

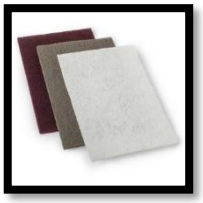
1. RUBBING OUT

Sheen is a measurement of how much light is reflected off a surface. A very smooth surface will reflect a great deal of light resulting in a high sheen or a gloss finish.



A "rough" surface means that light rays will be scattered or dispersed. Depending upon the degree of "roughness", the result will be a semi-gloss, satin, or flat finish.

Rubbing out involves using a mild abrasive to lower a gloss sheen by creating a micro-rough surface of very fine scratches.



While you can use wet/dry sandpaper or rubbing compounds, most sources recommend using either steel wool (000 or 0000 grade) or a synthetic steel wool such as 3M Scotch-Brite. (Gray or White pads only).

However, this process requires that you wait until the finish has fully cured (typically many days) and the process itself can be very time consuming. Accordingly, most turners opt to use a product with the desired sheen.

2. PREPARED PRODUCTS

Commercial finishes with a lower sheen (semi-gloss, satin, or flat) are simply a gloss version of the product to which a flatting agent – typically amorphous silica - has been added. The silica are invisible, translucent particles which end up on the surface of the dried finish. The result is a finish which while smooth to the touch, has a "micro-roughness" which similar to rubbing out, disperses light rays and reduces the sheen.

To get a consistent sheen, you must frequently stir the product to ensure that the silica is in constant suspension.

However, most professional finishers recommend against using products with silica since the finish can be quite cloudy, especially in satin and flat. The difference in clarity is obvious if you compare these two finishes (right). They prefer to rub out a gloss coat.

Bearing in mind that some may be reluctant to invest the time in rubbing out, there is one simple option that you may wish to consider if you are using a product with silica.

Using a flat, satin, or semi-gloss product, apply the initial coats **without stirring the container**. As the silica will have settled to the bottom of the container, you will be applying a gloss finish which will provide exceptional clarity. Then for subsequent coats, stir the product in order to temper the finish to your desired sheen while maintaining considerable clarity.

PARTING OFF

Thanks to Mike Neal for a great demonstration of ornamental turning with a rose engine, Vik Peck for her help in producing an excellent slide show and Graeme Evans for help with this edition. Thanks also to the members of the Executive and a special thanks to Mike Neal, Andre Robin, and Tim Soutar for their work in organizing the sale of Phil Cottell's tools.

CONCLUDING THOT