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The online
magazine of
the woodworkers
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No.
5



A selection of the
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articles, from our
fantastic magazines

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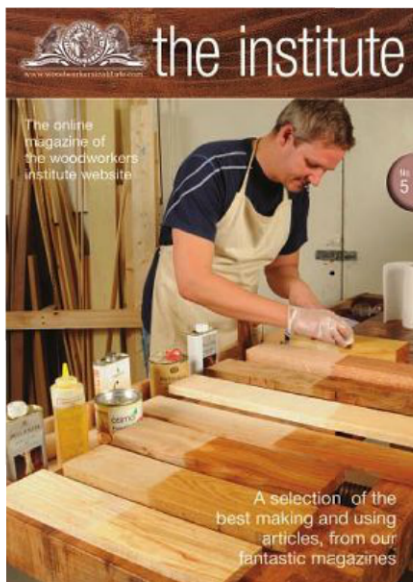
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All about FINISHING

Finishing a piece is often viewed as a chore by many woodworkers, but it is an essential part of what we do. Most start baulking at the sanding, but as we know, bad preparation results in a bad finish. Then of course there is the finish itself – a bad choice of finish or a rushed process can ruin all the hard work you have put into making something. Where the item is to be sited and what it is used for will have a bearing on what finish is suitable – does it need to be a hard wearing finish such as a lacquer or varnish; does it need to be heat or water resistant; can it be oiled to bring out the natural beauty of the wood so it radiates a lovely warm glow, then what about waxes?

The choices are myriad and can be confusing. We have cherry picked a few articles that may help make up your mind in terms of what you are going to use. We have also included a few hints and tips on getting the most from your finishes.

Don't forget – if you have some finishing tips and techniques that you would like to share with other readers, then please let one of the editors know. We are only too happy to talk to you and discuss the possibilities of including them in the magazines.

Have fun.



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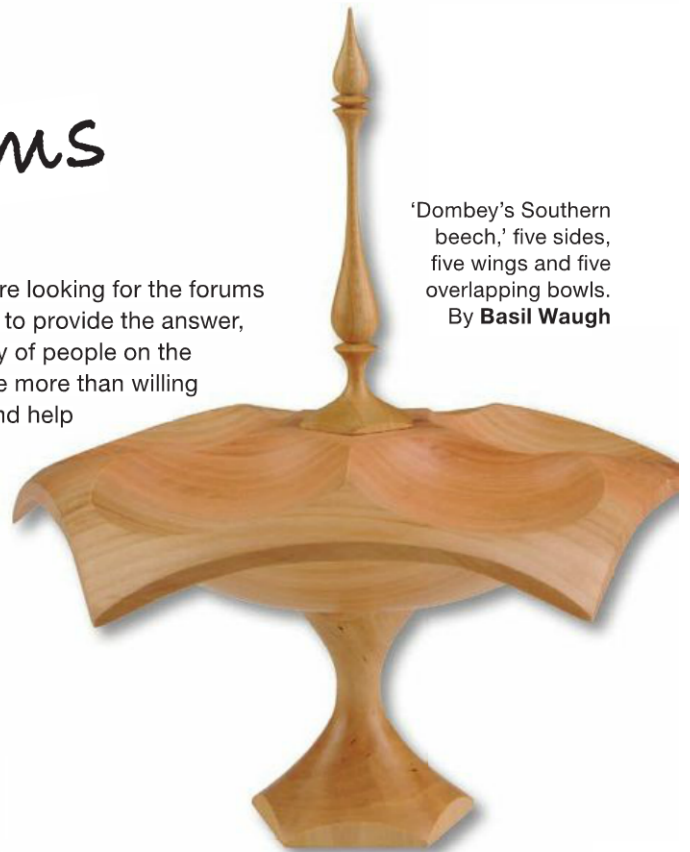
from the institute forums

The Woodworker's Institute forums and website is a rich and diverse place. Each magazine has its own section and you can participate in or just browse and follow recent discussions on tools, topics on design, top techniques for you to learn, best working practice, problem solving, galleries of work that other forum users are working on and have made, and so much more. The website also has many projects, features, tool tests and technical articles that you might like to look at too.

Whatever you are looking for the forums may well be able to provide the answer, or the community of people on the forum already are more than willing to offer advice and help where they can.

Here are a few of the amazing pieces of work other forum members have made recently.

'Dombey's Southern beech,' five sides, five wings and five overlapping bowls.
By **Basil Waugh**



'Apache's Arrow' pen turned on a Jnr Majestic rhodium roller ball kit. Made from the following feathers and materials: Grizzly saddle, (lower barrel); dyed red Amherst pheasant tail (lower barrel); a clipping of natural (black and white) Amherst pheasant tail (clip end barrel); red flat tinsel and some black flat tinsel, with the tubes being air brushed with a water based acrylic paint.
By **Mervyn Cadman**



'Art Deco inspired coffee table,' walnut veneer, with burr walnut veneer top and drawer fronts, and lacewood drawer handles.
By **Jim Cooper**



'Cherry Clock,' cherry and walnut, 230mm. By **Adrian Cobb**

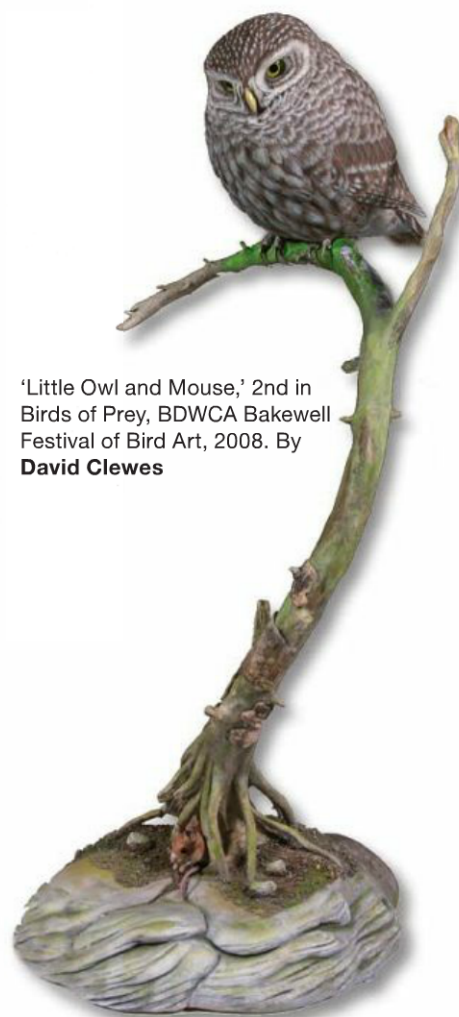


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'Pair of Merlins,' Highly
Commended at Advanced Level
Birds of Prey, BDWCA Bakewell
Festival of Bird Art, 2007. By
Mike Wood



Valet stand. By **steve74**



'Little Owl and Mouse,' 2nd in
Birds of Prey, BDWCA Bakewell
Festival of Bird Art, 2008. By
David Clewes

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www.woodworkersinstitute.com
today to see more from the forum
and much much more

All about...

Pigments, dyes & stains

Taken from
issue 160 of

**furniture
& cabinetmaking**



Michael Huntley explores the theory of coloured finishes for furniture

A variety of colouring agents from Michael's polishing kit

PHOTOGRAPHS BY MICHAEL HUNTLEY

Some people use only clear materials as a surface finish. However, the ability to apply colour to a finish can enhance the appearance of an item. The ability to 'swing' a colour can redeem an irregular piece of timber or remove a blemish. It is said that a good polisher can save poor cabinetmaking, but a poor polisher just ruins good cabinetwork.

Too often the phrase 'I like the natural

finish' is an excuse which hides the thought 'Colouring a finish is too difficult to understand'. Well, it is difficult and it is time consuming but I hope this article encourages you to go out and buy some colours and give them a try.

Let's start by clarifying what I mean by colours. Colouring materials for furniture come in a bewildering range of formats. The first thing to understand is that there

are three types of material that you might encounter: pigments, dyes and stains.

Each of these may be bought or may be mixed with different carriers or vehicles. The vehicles encountered in the furniture world are spirit, oil and water. There are also other additives which might, for example, alter the drying time, or the workability, or the resistance to ultra-violet (UV) light.

Pigments

Pigments have a comparatively large particle size and do not dissolve. They are usually bought as powders and are mixed with a clear resin which when dry binds them to a surface.

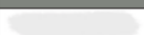
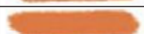
They can be mixed with wax polish to tint the polish.

They will also be found in paints which might be used for touching up blemishes. Both acrylics and water-colours can be used for this purpose. Oil paints dry too slowly to be used without long intervals between applications.

Please be aware that some pigments are very toxic. It is unlikely that you would come into contact with them but ALWAYS read the label and check the data sheet.

Table of pigments

These are some of the most common pigments that I use and the form that I use them in, i.e. powder, acrylic paint, or both.

Colour	Name	Form	How used
	Chalk (whiting)	Powder	Mixed with vehicle
	Titanium white	Pre-mixed tube	Artist's acrylic
	Vermillion	Pre-mixed tube	Artist's acrylic
	Venetian red	Pre-mixed tube	Artist's acrylic
	Dragon's blood	Powder	With vehicle or wax
	Cadmium red	Pre-mixed tube	Artist's acrylic
	Yellow ochre	Pre-mixed tube	Artist's acrylic
	Yellow ochre	Powder	With vehicle or wax
	Chrome yellow	Pre-mixed tube	Artist's acrylic
	Raw Sienna	Pre-mixed tube	Artist's acrylic
	Raw Sienna	Powder	With vehicle or wax
	Burnt Sienna	Pre-mixed tube	Artist's acrylic
	Burnt Sienna	Powder	With vehicle or wax
	Raw umber	Pre-mixed tube	Artist's acrylic
	Raw umber	Powder	With vehicle or wax
	Burnt umber	Pre-mixed tube	Artist's acrylic
	Burnt umber	Powder	With vehicle or wax
	Brown ochre	Pre-mixed tube	Artist's acrylic
	Brown ochre	Powder	With vehicle or wax
	Lamp black	Powder	With vehicle or wax

Dyes & stains

Dyes

Dyes are organic molecules that absorb particular wavelengths of light, giving rise to perceived colour. They may be animal, vegetable or mineral. The particle sizes of dyes are on a molecular level that allows them to penetrate substrates such as timber.

In 1856 William Perkin produced the first synthetic dye. Many dyes are now synthesised from aniline which is a chemical derived from coal tar.

The colours in aniline dyes used to be considered fugitive because they faded, but there are now varieties such as Orasol which are very stable.

Stains

The term stain is used to describe any material that adds colour to wood while still maintaining a high degree of transparency. Apart from attempts to make a cheap wood look like an expensive timber, stains are very useful

in matching variations in boards and blending sapwood to the colour of heartwood.



Note: some of these are dangerous chemicals. I include them to show the range of materials used for colouring wood, but do not necessarily recommend them. As with all chemicals full safety precautions must be taken.

Some traditional stains & colorants

This table shows some of the variety of colorants that have been used over the years. Some are still used by traditional polishers but the anilines are mostly used today.

Yellow	Brown	Red	Green & blue	Black
Dilute nitric acid	Strong nitric acid	Brazilwood	Verdigris & ammonia & acetic acid	Vinegar & rusty iron
Gamboge	Dilute sulphuric acid	Dragon's blood	Aniline dyes	Lampblack & turpentine
Aniline dyes	Ammonia	Madder		Hot sand
	Vandyke brown	Aniline dyes		Sulphuric acid (on oak)
	Aniline dyes			Aniline dyes

Jargon buster

Hue	The name of the colour, i.e. red, orange, yellow, etc
Value	The relationship of a colour to black and white. Higher values are lighter and lower ones darker. Adding black or white changes the value but does not change the hue
Intensity	The strength of hue as compared to a colourless neutral grey. Intensity is reduced by mixing with another colour

Choosing colour system

The type of colour that you use is based on experience but a newcomer needs to be aware that whatever system is chosen, it must be possible to remove it if it all goes wrong.

Certain systems are not reversible, such as chemical colouring. There is one exception to this rule and that is bleaching. You can always make a lighter area darker, so if bleaching were to go wrong you could lay on a dark colour, but it does require a lot of experience to rebuild a bleached area so avoid bleaching until you are quite sure how to do it.

Oil stains are hard to control and both oil and spirit stains are difficult to remove, so they are not good for the beginner. That leaves those that use water as a vehicle, and I will be describing the use of water stains next month.

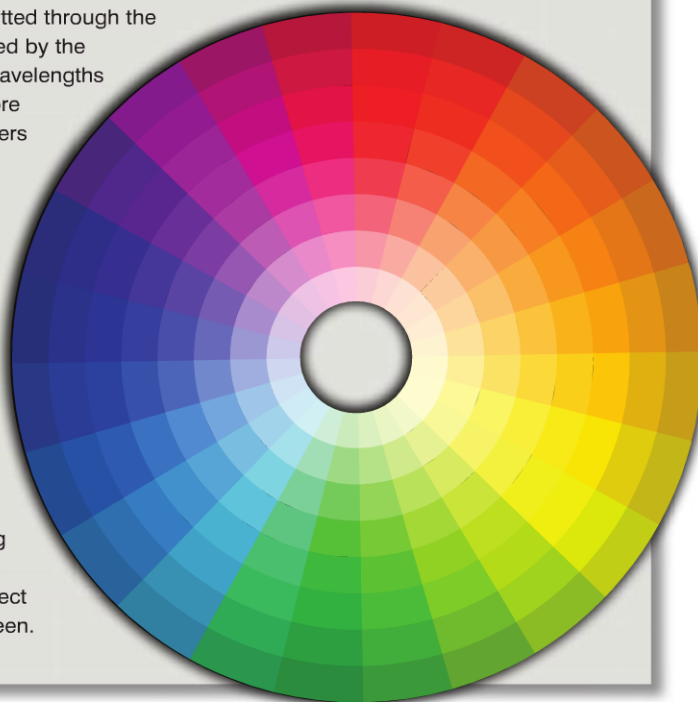
I said that one should aim to use a colour that can be easily removed from the surface. One way to make removal easier is to seal the surface and then use the colour within later layers of clear

Complementary colours

Every school child is familiar with the colourwheel on which, starting at 12 noon, colours are arranged in the following order: red, orange, yellow, green, blue, indigo, violet – the colours of the rainbow.

A complementary colour is a colour that is directly opposite to the colour being considered. For example the opposite of red with a touch of orange is green with a touch of blue.

When light falls on a surface it may be reflected, transmitted through the object or absorbed by the object. If some wavelengths are absorbed more strongly than others then the object will appear to have the colour complementary to the wavelength absorbed. For example, strong absorption of blue will make the object appear yellow and strong absorption of red will make the object appear bluish green.



film. Colour can be painted on within the polish layer. If it all goes wrong the polish can be cleaned off with a solvent and you can start again. I will be describing that process next month as well.

Finally, you could opt for a semi-transparent coloured polish and I will be showing examples of those too. F&C

Further reading

Mark Cass's **Success With Finishing**, ISBN 1-86108-426-9, covers most aspects of finishing including colour and is available from GMC Publications, tel 01273 488005 or online at www.gmcpublications.com

Michael Bennett's **Discovering and Restoring Antique Furniture**, ISBN 0-304-31809-4, has a good section on colouring.

For many years Charles Hayward's **Staining and Polishing**, ISBN 07135-1424-8, was the standard work and is still hard to beat.

Testing, testing...

Use an offcut to create a test panel like this. The colours down the narrow side are mahogany, walnut and oak. The colours across the top are orange, grey, satinwood and brown. All of these are Myland's water-stains. Many other colours are available. The ragged edges show how colours bleed under masking tape. In real use you need to decide on your sample recipe and colour the whole surface in one go.



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Shaker oil finishes



Matt Long reproduces classic oil finishes

The Shakers were very particular about the finishes on their furniture. At first, shaker furniture was simply painted, but they soon thinned paint to make stains, which showed off the grain. This led to oil and water stains, often varnished and polished. Here are a few techniques and oils to reproduce the look...

Taken from
issue 33 of

**WOODWORKING
Plans & Projects**

Applying successive oil coats



Once a first coat of oil is applied, it should be left for a while to soak in – 20 minutes to half an hour is sufficient, any longer and it will leave a sticky residue. After the time is up, use a cloth to wipe the surplus off and allow to dry overnight.

Although you can use a brush or rag it is far better to make up a pad similar to a French polishing rubber to apply the oil.

Flatting off between coats



Now use a fine closed coat abrasive intended for flatting between coats. Often these have a stearate coating to prevent clogging and sticking to the dried finish. The purpose is to de-nib and remove any dust from the surface, giving a silky smooth result. Use a tack cloth to wipe dust away. Flatting should not penetrate the oil coat – it is to give a smooth surface.



European ash with
gloss finish tung oil
by Mylands

Burr elm with
matt finish tung oil
by Mylands

Elm with Osmo
Polyx-oil

Finishing oil on
rapala lacewood by
Chestnut

Mylands tung oil

Mylands finishing oil is tung oil based and is easy to wipe on and off and buff, thanks to its ingredients. It can be finished with fine wire wool to whatever lustre you choose. Once cured, the oil forms a durable, water and heat resistant surface which is easy to re-finish. It has a slight darkening effect, as do most oils. Three to four coats are recommended and it is deemed suitable for kitchen worktops, bathrooms, and exterior woodwork/furniture. It is also available in a matt finish, here seen on burr elm.

Osmo Polyx-oil

Osmo Polyx-oil is based on natural vegetable oils and waxes and is suitable for kitchen worktops, flooring and furniture. Again, it is based on naturally occurring products that have been blended to provide the ease of application of an oil finish with the resistance and durability of a surface finish. It is water repellent and hard wearing and is easy to apply. Two thin coats seem to be all that is needed and it leaves a soft glow. Has a large following amongst cabinetmakers.

Chestnut's finishing oil

Chestnut's finishing oil is tung-oil based and offers high water resistant qualities and is for interior woodwork only. It is easy to apply and can be buffed to a high gloss lustre. Two to three coats are recommended but as with all finishes, follow the manufacturer's re-coat instructions. The more coats the higher the shine. Buffing or matting down will allow you to manipulate that lustre as you choose.



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Nutshell's Herb & Resin oil

Herb & Resin oil from Nutshell natural paints is again easy to apply. It can be used as a finish in its own right or can be used as a base coat for waxes or other finishes. It is water and insect repellent, and antifungal. It forms a low lustre finish and can be used on interior and exterior woodwork.

Mike Mahoney's utility finish

Mike Mahoney's utility finish is an oil often used by turners and carvers but is typical of oils being used more and more for items that come into contact with food. People have been using sunflower, nut oils & plant extracts for years to create a finish. You can go into a supermarket and use the ones sold in the food aisles. They form a durable finish that is easy to re-finish if tarnished, but do not fully cure, so the surface has a matt soft lustre to it. This walnut oil is slightly different as it is heat treated – not to be put on a salad – which allows it to form a harder, more durable finish.

Liberon pure tung oil

Liberon pure tung oil has proven the test of time. It is highly water resistant and can be used on interior and exterior woodwork. Depending on how much one buffs it after curing, it leaves a matt or satin lustre on work. Again, it darkens the wood slightly. It has a thicker consistency than the other products mentioned and requires just a little bit more elbow grease to work it into the surface. It is highly thought of when one wants an oil finish which has that little bit extra water resistance. ■

Nutshell Herb and Resin oil on maple

American oak with Mike Mahoney's utility finish

Lauan with Liberon pure tung oil

Agba with Liberon pure tung oil

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TECHNICAL: WHAT YOU NEED FOR EFFECTIVE SANDING

Effective sanding

Andrew Thomas shows what you need to achieve a smooth and polished finish to your carvings

Taken from
issue 116 of

CARVING

PHOTOGRAPHS BY ANDREW THOMAS

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→ **T**he surface texture finish of a carving or sculpture is a matter of subject and personal taste. For my style of work, I always finish to a smooth polished surface, as this brings the form to life and enhances the effectiveness of the shadows as they strike across the piece in the changing light throughout the day.

The sanding of a carving can be a very laborious task, so my intention with this article is to guide you through the quickest and most effective techniques to give you a successful and fantastic finish.

Preparation

Before you start the first grade of sandpaper, it is very important to go over the complete surface of your carving and tidy up any deeper gouge cuts or uneven surfaces. Make sure that all the corners, the eyes and eyelids for example, are neatly cut and finished without any deep knife or messy tool cuts around them. This will give your work a better base from which to start the process of sanding, and ultimately



▲ Brushing on hot water raises the fibres of the wood, allowing the following grit to be worked more easily and effectively

Grit orders...

Using abrasion for sanding to a smooth finish is accomplished by working from a coarse grit down to a fine grit. There are two routes of sanding grits which I use:

- 100, 150, 240 and 400 grit for sanding over a large surface with not too much detail
- 120, 180, 240 and 400 grit for sanding smaller and more intricate areas

speed up the process.

It is also very good practice with some subjects, in particular figurative or animal, to sand as you work through the carving. When carving a figure, one normally starts with the head and works down from there, so when the tooling work is finished on the head, one can proceed with the first grade of sanding, which will bring the subject to life and give you a clearer understanding of how it will 'connect' to the next area you are about to work. This also breaks the task down into smaller chunks, which is of great value when it comes to the final sanding, as you would have already completed the hardest and most important grit.

Eradicating all marks

The first grit that you use, be it 100 or 120, is the most important and hardest of all of the grits, as this is used to eradicate all of the tool marks and blemishes etc completely. This is a fundamental rule and has to be done with great care and attention, otherwise any tool marks, knife cuts or blemishes will persist through the other grades and will show when the carving is finished and polished. This is reasonably easy to do on the more open areas of your work but much harder when it comes to awkward areas around the finer details and corners of a carving.

When you reach the stage when you think you have eradicated all of



the tool marks from your carving, take it to a source of natural light and examine it carefully by slowly turning it around and observing the shadow as it casts across the surface, as this will show up any undulations or little dark uneven blemishes left by the gouges.

▲ Before the first grade of sandpaper is used, all of the deeper tool marks are reduced down to a more even surface to facilitate quicker and more effective sanding

Hot water

When you have completed the first grit, use a soft paint or polishing brush to dust off the carving, giving special attention to corners, knife cuts or deep folds. Then pour or brush hot water over your carving and leave to dry – this naturally raises the fibres of the wood, allowing the following grit to be worked more easily and effectively. It also exposes any deeper scratches or areas that need to be worked on a little more before moving to the next grit.

Now you can simply work through each of the subsequent grits meticulously, removing all the scratches from the previous one and repeating the hot water process in between. When you have worked all the grits to 400, use one of the very fine grit discs to bring the surface up to a fine sheen.

Velcro backed disks

There is a variety of Velcro backed discs such as Festool's Platin Disks, or Hermes' Fine Net Disks, which come in grits from 400-4000. These are brilliant for eliminating those final minute surface scratches left from the 400 grit to bring the carving to a complete polished finish.

I would not, however, recommend using wire wool for the final polishing unless you firstly seal your carving with sanding sealer or several coats of Danish oil. If used on bare wood without it being sealed, then it will produce nasty grey marks that are almost impossible to remove without going back through the grits. The Velcro discs give just as good a finish as wire wool, if not better, and without all the mess of the minute particles of steel getting into every nook and cranny.

➤ Festool Platin Disks – 1200 grit, and Hermes Fine Net Disks – 2000 grit



Abrasive

Through trial and error I have found that you get what you pay for with sanding products and the most effective ones are the most expensive, but the extra that you may pay is easily justified by their durability, life-span and speed of use, which in all fairness is exactly what we want.

The main one that I have been using for many years now is the RB406 J-Flex, cloth-backed, aluminium oxide roll, which comes in grits from 80 to 600 and in 100mm x 1m lengths. It is exceedingly flexible and takes folds very well without fracturing and becoming useless, so it is great for working into tight corners effectively. It can also be lubricated with water to wash it, or oil for certain finishing purposes.

Some of the main woodworking companies charge around £4.30 per metre for it but if you do a search on Google, you will be able to find it for £2.25 a metre.

► RB406 J-Flex, cloth-backed, aluminium oxide roll, 80-600 grit



Abranet strips



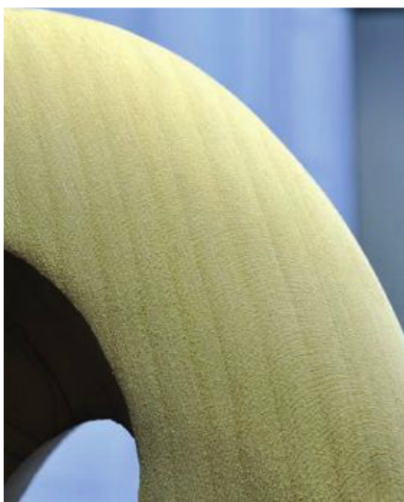
◀ Abranet strips by Mirka come in 80-600 grit strips

I highly recommend the new Abranet strips by Mirka. They are reported to be one of the most important developments in the history of sandpaper, which I agree with. The product has a unique webbing construction that is Velcro backed and contains thousands of small holes which keep the dust off the surface of the abrasive material, and produce an incredibly smooth uniform sanding pattern and surface. The image below left shows up close the even surface of the wood after 120 grit was used.

It is very quick to cut through the gouge marks and remains very effective in its grit far longer per strip than all the other conventional sandpapers I have ever tried. The one negative aspect of its composition is that it does not fold as well as the J-Flex, especially in the coarser grits, due to its stiffness.

It is available in grits 80-600 and comes in various sizes, for example: 75 x 125mm strips in a box of 50 for around £12. I have found the cheapest prices on eBay.

◀ Close-up of the even surface left by the Abranet 120 grit



Sanding with and across the grain



▲ Where possible, always sand in the direction of the grain, as sanding across the grain creates scratches that are extremely hard to remove

The most important rule of the sanding procedure is always to sand in the direction of the grain where possible, as sanding across the grain creates scratches that are extremely hard to remove. If this is not possible then after you have removed all of the tool cuts with the first grit, go over these areas again using the same grit but use a softer pressure, and carefully remove all of the deeper scratches.

Cut your sandpaper into small strips about 40 x 100mm, and don't try to economise on it – when it starts to become less effective and you are working harder, then it is time to cut a new piece.

➔ Sanding sticks & emery boards

Sanding sticks are an excellent solution to many awkward and inaccessible areas that can't be sanded properly with your fingers. Simply cut the ends to the correct shape and size for the job that you are doing and either hold the sandpaper in place on the tip of the stick, or draw around the shape of the stick onto the sandpaper, cut out the shape and fix it to the stick with a spot of instant glue.

Once worn, it can easily be removed with a knife and then after a quick rub over the tip with 100 grit, it is ready to be used all over again.

Similar to the sanding sticks, manicure emery boards are excellent for trimming to the right shape and angle for awkward areas and come in many different grits. They are quite rigid and are easily cut back with scissors when worn.



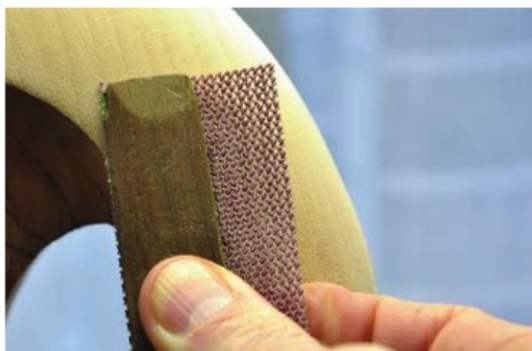
➤ A small selection of my sanding sticks used effectively to get into awkward areas



▲ A small triangular sanding stick is used to even the surface of the corners of the eye



➤ A piece of Abranet is wrapped around a small dowel and used to access awkward areas



▲ A piece of Abranet is held on a straight-edged stick and can be used with a lot of pressure if necessary to even the surface of the wood



▲ Manicure emery boards can be trimmed to shape for access to awkward areas

Getting into tight spots

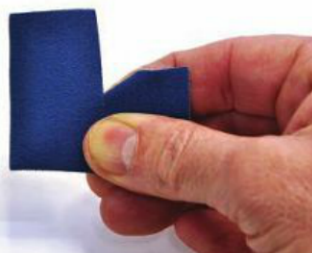
There are many ways in which you can roll or fold your sandpaper to try to shape it to the same contour as your carving, but if you wish to get

into a tight corner of an eye, for example, then this fold is particularly good because it forms a very rigid spine from the end to the tip, allowing you

to add quite a lot of pressure to the area that you are working on. Follow steps 1-4 to fold the paper to best advantage for getting into those tight spots.



1 First fold the sandpaper over at a 90° angle...



2 ... then fold the sandpaper up to meet the horizontal edge...



3 ... fold the sandpaper up over the 45° angle...

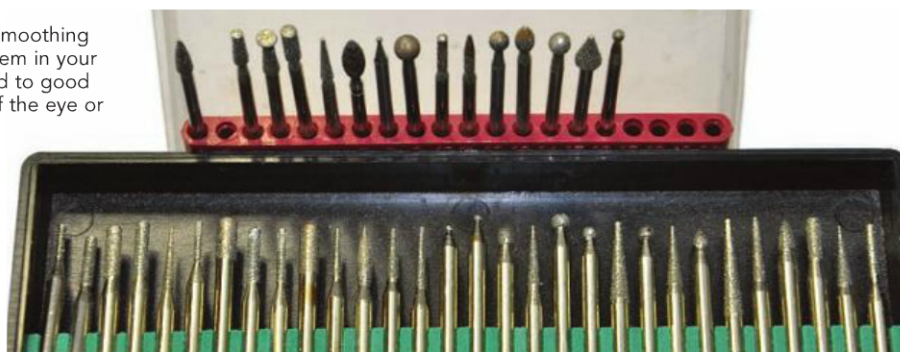


4 ... and fold the sandpaper back down and around the lower 90° angle

Diamond rotary burs

Diamond rotary burs are excellent for smoothing wood, but you don't just have to use them in your power carver. They can be used by hand to good effect in small holes such as the pupil of the eye or nostrils etc, which in this situation is a much safer technique than using them in a power carver with the possible risk of it spinning over the crisp edges of the outer circumference of the pupil.

► Two typical sets of diamond rotary burs that are readily available



▲ A 4mm diamond burr is used to smooth the inner surface of the pupil



▲ A 1.5mm diamond burr is used to smooth the inner surface of the polar bear's nose

Other useful materials



▲ A selection of different flap wheels that can be used to sand awkward undulations and hollow areas



◀ Sponge backed sanding materials come in various grits and work well over large undulating areas

▼ A selection of screw-on and self-adhesive miniature sanding discs, available in grits 60-400

Flap wheels have a fairly limited use for sanding carvings but can be handy when trying to reach awkward undulating surfaces – just be careful to keep them moving evenly so that they do not create any grooves and further add to your work.

Sponge-backed sanding materials are also very good for sanding over undulations and curves and can be very useful over the larger surfaces, but they do tend to clog very quickly, so be prepared to keep knocking them to get the dust off.

Miniature sanding discs have their place in the finishing department

and come in many sizes and types – Velcro, twist and lock, screw-on, and self-adhesive.

All are very good for getting into awkward areas and can be used in any drill, power carver, or pneumatic hand pieces.

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In conclusion

If you follow these simple guidelines with patience, perseverance and meticulous attention to detail, then you will always be able to bring your projects to a perfectly polished, professional-looking finish with a great wow factor to boot. ■

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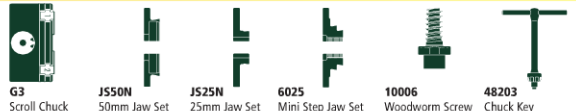
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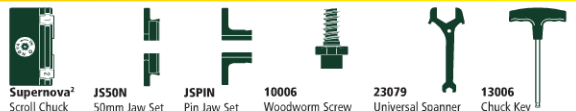


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Taken from
issue 214 of

Woodturning

Top tips for achieving a better finish

Bert Marsh and **Mark Baker** discuss the various tips and techniques to follow and apply if you are looking to achieve a better finish on your work

Finishing is a big issue for many of us and what finish to use and in what situation causes quite a lot of vexation. To be honest, we all have our preferences as to which finishes we use and prefer. We may tackle similar projects, but

much of what we buy is based on what is available in our own locality. Therefore, this will have an effect on what we use and also what type of projects we make – decorative, utilitarian or component parts – for something else such as a table,

balusters or chairs. That said, there are some things that hold true no matter what finishes and materials are available to you.

Here are a few that will help you on your way to achieving the perfect finish on your work.

SKILLS & PROJECTS

Top finishing tips

16 TOP FINISHING TIPS

1. USE THINNED DOWN CELLULOSE SANDING SEALER

When working with wet wood, try applying a thinned down cellulose sealer coat prior to sanding. This will not only harden off the surface but it seems that as the solvent dries, solvent within the sealer helps to dry the surface off. This dry and hardened surface is easier to sand to fine grit grade prior to you applying a surface finish of your choice, such as wax or oil.

When sanding bowls etc. where the grain runs at right-angles to the bed of the lathe, reverse-speed on your lathe is a great advantage for removing raised grain. Make sure your chuck or faceplate is securely

held before going into reverse.
Bert Marsh

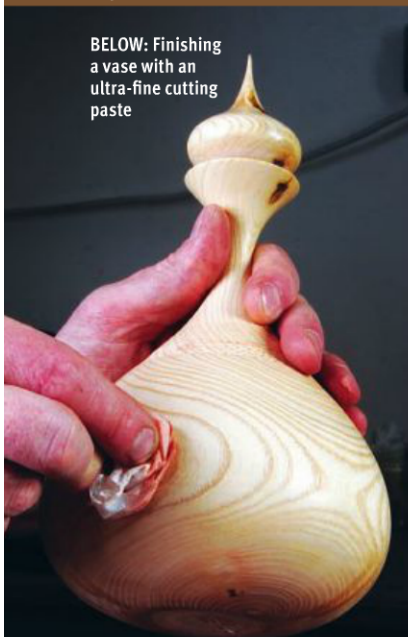
If you encounter a bit of grain that is somewhat difficult to turn – a bit soft and fluffy – spray it with a little water, but not too much. Alternatively, if you are eventually using an oil finish, apply a bit of that oil to the area concerned, leave it for a few minutes and then turn it. This will give you a cleaner cut that is easier to sand. *Mark Baker*

BELOW: Applying a thinned down cellulose sealer coat to a natural-edge bowl prior to sanding



2. BUFF WITH AN ULTRA-FINE CUTTING PASTE

BELOW: Finishing a vase with an ultra-fine cutting paste



If using a surface finish such as a lacquer it is, at times, difficult to get a fine, uniform finish straight from the brush or aerosol application. Let it dry and then buff it with an ultra-fine cutting paste of some sort. These are often called burnishing waxes, pastes or creams. You can do this by hand with the work on or off the lathe, or by using a buffing wheel with burnishing cream applied to it, which can then be mounted/fitted in a drill or on the lathe. These burnishing products remove any minor finishing defects and can be used to create a matt, satin, high gloss or an almost mirror-like lustre depending on the finish used. Be careful with the edges of work as excessive buffing will remove the finish applied to it. *Mark Baker*



3. PLACE YOUR PIECE OF WORK CAREFULLY

The placing of a piece of work is vital in terms of showing it off to its fullest potential. If the piece has decorative features on the underside, then when viewed from the top they are not visible, thus losing visual impact. Lighting is also vital, as if the piece is placed in a dark corner, who can see it to its fullest potential? So chose a location carefully. Also, avoid placing the piece in strong sunlight as this will cause UV colour degradation. Many finishes are now being made with UV inhibitors to minimise colour degradation but they will not stop it completely.

Bert Marsh

BELOW: The placing of a piece of work is vital in terms of showing it off to its fullest potential



4. REMOVE EXCESS SANDING SLURRY

If using oil as a sanding lubricant make sure the timber being used is of a uniform colour – light coloured sapwood would quickly become contaminated with a darker heartwood sanding slurry. This is a great way to achieve a smooth, fine finish quickly and with little or no heat generation. However, the process does darken the wood a little and clogs the abrasive quickly, but this clogging is dealt with by wiping a bronze brush over the abrasive and the dust oil mix is quickly removed. Once sanded to a fine finish, wipe over a clean cloth loaded with fresh oil to remove the excess sanding slurry and then buff to a fine finish. *Mark Baker*

OPPOSITE: Once sanded to a fine finish wipe over a clean cloth loaded with fresh oil to remove the excess sanding slurry and then buff to a fine finish

6. APPLY A LACQUER FINISH

If a more moisture-resistant finish is required I use a lacquer finish. Apply it by spray gun or aerosol in multiple thin coats for a finer finish. One thick coat will look like gel or jam and will not be as good a finish as the thinly applied coats. Conventional spray guns require a compressor, practical experience, knowledge and careful selection of products used to achieve a good finish, whereas a shop-bought aerosol is easier to use. It is thinned to the right state and you do not have to outlay a lot of money to use them, but you are limited by their mix. *Bert Marsh*

RIGHT: Applying a lacquer finish in aerosol form to a bowl exterior



8. CARE WHEN SANDING

When turning between centres be careful to not round over the detail you have carefully cut. Also, you do not usually have to start with very coarse grades to get a fine finish. So, the 60 grit can be left on the shelf for this type of work. *Bert Marsh*

OPPOSITE: When turning between centres be careful to not round over the detail you have carefully cut



5. USE CELLULOSE SANDING SEALER

My favourite finish for decorative pieces is cellulose sanding sealer, which is often thinned down by as much as 50%. This is then brushed on liberally and dried off while the work is stationary. If the work is rotating whilst the mix is still wet, spider-like streaks or runs will form which are difficult to remove.

This process may raise the grain slightly. I lightly sand it with a fine grit grade of abrasive then apply a

thin silicone-based wax – yes, that's right, silicone based. Beeswax-based polishes are thicker, fill the grain and often don't provide as clear a coating on the piece, thus darkening it, or making the finish a bit more opaque/misty. This therefore compromises the natural beauty of the wood. *Bert Marsh*

ABOVE: Cellulose sanding sealer is brushed on liberally and dried off while the work is stationary

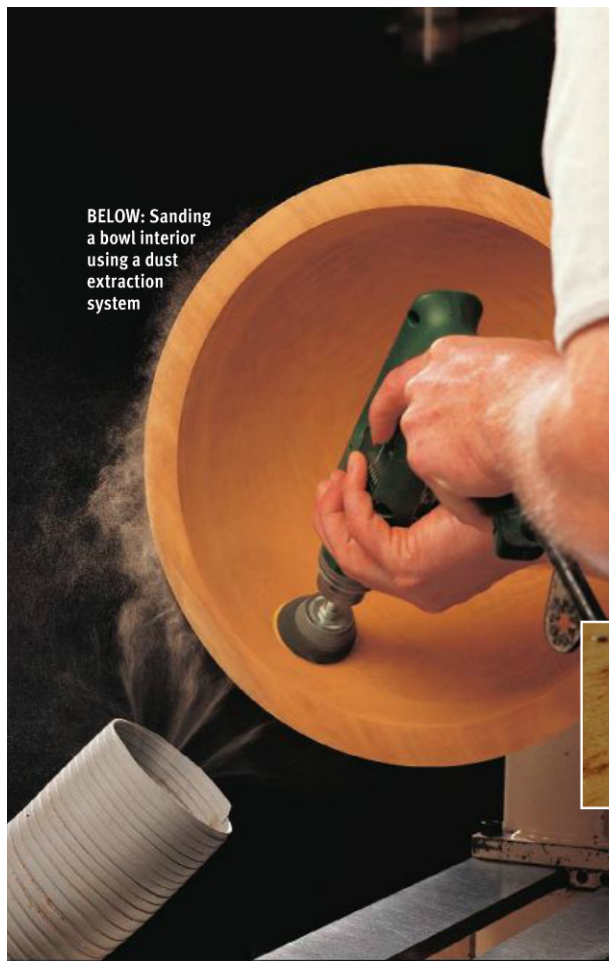


7. USE A TEST PIECE

When it comes to applying a finish it is make or break time. The simple fact is that even if you are very familiar with a certain finish, wood is so variable in the way it absorbs finishes, especially when applying coloured products such as dyes etc. You don't really know how a piece will look until after the finish is applied to a piece. This can be problematic if you do not like the end result and have potentially ruined a great piece of work. A simple solution is to take a scrap piece of the wood you are working with, sand and clean it up, then apply the colour or finish to it as you would the project. This then allows you to see if you like the results. *Mark Baker*

MAIN: Use a test scrap of wood to decide whether you like the effect





BELOW: Sanding a bowl interior using a dust extraction system

9. USE ADEQUATE DUST EXTRACTION

When applying finishes to work make sure that the air is dust free, as dust contamination or finish is difficult to remove. Dust contamination can also be felt and is, at times, visible though the finishes applied, thus marring it when viewed and handled.

One point I would like to add here is that dust can be removed by effective extraction systems. Inhalation of any dust is problematic and you never know when you are becoming sensitised or damaged by it. Take

sensible and proper precautions to avoid dust inhalation and also the chemical vapors from finishes. Check the manufacturers MSDs, COSHH and other safety notifications for specific details and ventilation requirements.

Ambient air filters should be placed at the back of or behind the lathe to exhaust fine dust that escapes the at-source extraction. By placing it in this position, the dust is taken away from you and not up into the air over your face. *Mark Baker*



ABOVE: Macro shot showing dust stuck in the applied finish. This compromises the visual appeal of the piece and you can also feel the dust on the surface

The dust from all hardwoods can cause serious health problems, especially with spalted timbers – so install the dust extraction you can afford. Note: the important thing is to extract the fine dust, not necessarily the shavings. *Bert Marsh*

10. WORKING WITH SPALTED TIMBER

Spalted timber is, at times, notoriously difficult to work. Depending on how far the rot has gone it can be soft and spongy. You can soak the piece in thinned sanding sealer then let it dry; apply a wood hardening product to it, or cyanoacrylate adhesive. But remember some of the products can stain or be visible if only used on a small area, so it is best to treat the whole piece to ensure uniformity of colour. Also ensure that the products are fully dry prior to starting the lathe up again. *Mark Baker*



BELOW: Turning a piece of spalted timber

11. BUFFING YOUR PIECES

Buffing wheels are very effective and quick at applying an even, uniform coating of wax to a piece of work. Pick a soft buffing wheel, mount it in a drill or on the lathe and apply the wax of your choice to the wheel. While the wheel is rotating apply a wax of your choice – you only need to apply a small amount – then buff the work. You will see that the wheel applies an even, fine coating that is more consistent than when applied and buffed by hand.

When sanding use a low lathe speed, and if power sanding, use

a low drill speed as well. For the coarser grit grades used, this results in less heat being generated and also this slow speed allows the abrasives to cut rather than skim across the surface, glazing it without removing the surface damage. After 240 grit you can increase the speed with each successive grit grade used – within safe operating limits for the diameter and structure of the piece being sanded. *Mark Baker*

BELOW: Buffing wheels are very effective and quick at applying an even, uniform coating of wax to a piece of work





12. USE THE CORRECT TOOLS

The primary shaping tools, such as gouges or chisels, rely on a bevel rub technique to provide maximum control, allowing you to get the best finish from the tool.

Scrapers are usually used to remove the small surface imperfections prior to sanding, and are not usually the

primary shaping tools. The faster the speed of the work, the finer the finish – but make sure you are using a speed that is practical and safe.

Best Marsh

LEFT: Finishing a bowl interior using a round-nosed scraper



LEFT: A natural-edge vase, turned by Bert Marsh

14. CHECK YOUR WORK IN DAYLIGHT

The quality of the work's surface prior to applying a surface finish will dictate the end result.

No matter how much artificial lighting you have in the workshop, there is no escaping the fact that daylight is the best light for showing up micro scratches and surface pull out. So after sanding, check in daylight carefully before applying the final finish. In the end an applied finish does not cover up bad turning mistakes. *Bert Marsh*

16. LIGHTLY SPRAY YOUR WORK

To minimise the risk of raising the grain when applying a finish, especially to acrylics, lightly spray the sanded work with water, allow to dry and then sand with a fine grit abrasive to remove the raised fibres. If it happens after the application of a finish, or if the finish feels a bit rough, you can sand – denib – with abrasive at this stage, too. Then apply a fresh coat of finish. *Mark Baker*

13. ABRASIVES

Use as coarse a grade of abrasive as necessary – a house brick is quite a good abrasive (joke) – to remove all surface damage and undulations prior to moving on to the finer grades. Coarser grades reduce the heat generated in the initial stages and, of course, cut quicker. The subsequent grits are only used to remove the scratches

left by the previous grit grades used. Paper and cloth-backed abrasives are available, but cloth-backed wraps around/forms to the work better, thus making it easier for use when turning. But a little pointer to this is that the grit you finish with is dependent on the wood being used. The harder closer grained woods require sanding to a finer grit grade than soft woods would require. *Bert Marsh*

Abrasives have developed no end in recent years and there are now abrasives for nearly every material known, some of these are ideal for use in woodturning too. Abrasives are another tool we use, and as such we need to make sure that they are sharp and capable of the job at hand. We are now able to go down to finer grit grades than ever before, making use of them either by power or hand sanding. Some are designed to be used for dry sanding; others can be used with a lubricant. But when using a lubricant for sanding, be careful of what makes you choose to use as some abrasives are dyed and leech colour, which then stains the work. *Mark Baker*

BELOW: Use as coarse a grade of abrasive as necessary for the piece you are working on



15. CHOOSE CAREFULLY

Oil-based finishes are fast and easy to use but can darken the wood a little. Some set to form a hard surface finish such as many Danish-type oils, others such as vegetable oil do not fully set. Both can be used, but choose when and where carefully. The beauty of using oil finishes is that they can be easily repaired whereas lacquers etc. are trickier. *Mark Baker*





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