Lake Charles Woodworkers Club, Inc. May 2002

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Tom Simms was our host and presenter this month at Harrison Paint. Tom had just returned from a finishing conference in Dallas and had some of the latest information on new finishing products.

Some of the new products Tom reviewed included Old Master wood stains. These products come in a variety of colors and applications. The gel stain line contains the highest level of colorants and are designed to cover the wood thoroughly.

The gel stain products are designed to be wiped on and wiped off to achieve the level of color you want. These are easy to handle and very concentrated. The next line is described as a wipe-on. The wipe-ons give you more control of the final color than the gels. Applied on a prepared surface with a cloth, the user can easily move the product around to get the density needed. The wipe-ons can be reduced to lighten the stain.

The final line are the penetrating stains. These flow very easily, do not contain as much colorant and can be used in a sprayer. In each case, Tom applied them to a variety of woods show the varied results of each.

To control stains even more, Tom discussed sealer products. Sanding sealers fill in the pours of wood so that subsequent finishing products go a smoothly. They can also be used to control stain penetration by reducing the sealer. Most sanding sealers are shellack-based and consequently, cab be reduced with alcohol. The sealer Tom recommends is from Zinsser. They product a wide variety of products including several different sealers for different applications.

As sealers can be easily reduced, they can be used for stain control. Simply reduce the products as described in the directions and apply with a brush. Tom recommends a brush application of this and most clear products as this reduces uneven surfaces and bubbles. Zinsser's Seal Coat is VOC compliant, so there is no need to wear air filtration of respirators when using the product. Cleanup is with either alcohol or ammonia.

Seal Coat can also be used as a final coat (it's shellack-based), though you'll need to apply lots of coats to give a deep, rich finish. Seal Coat is compatible with most final finishes including lacquers and polys.

Tom suggested using wet/dry sand paper or synthetic steel wool over regular steel wood. Steel wood comes saturated with oil and this can affect how subsequent coats go on the wood surface and adhere.

Finally, Tom gave all of the members a great deal on the products he showed and demonstrated: 50% off on all Franklin adhesives (Titebond) and 25% off on all the other products. There was a long line of woodworkers taking advantage of this great deal.

Show and Tell this month brought some great scroll work by Eltee Thibodeaux, including one of his three foot "mansion" clocks. John Fontenot brought a great rolling pin that used a unique way to attach the rotating handles as well as beautiful turned gravel with an engraved brass plaque. Barry Humphus showed a new purpleheart bowl as well as a partly completed one of a hard wood obtained from Belieze. You can see some of these on our web site under Member Projects.

Coming Up

Saturday, May 11, 9:00 a.m. — Join host John Marcon at his studio with a presentation by Steve LeGrue of Houston's The Cutting Edge

SHARPENING ROUTER BITS

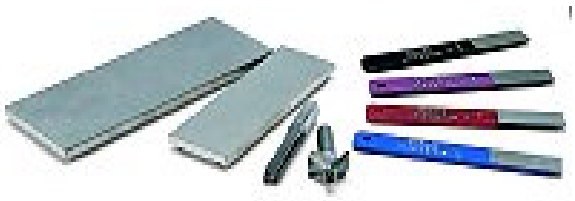
If you have a router bit that needs sharpening, especially if it is carbide tipped, should you try to sharpen it or get a new one.?

As long as the bit is not excessively dull or nicked you can sharpen it yourself. Excessive wear or damage to the bit's carbide cutters will require professional servicing. Professional sharpening usually costs less than $10 depending on the bit.

Before sharpening check to make sure the bit is actually dull and not just in need of a cleaning. Cleaning thepitch and resin off your bit may solve the problem and it's the first step in the sharpening process. You can clean the bit with a solvent like WD-40, paint thinner, or denatured alcohol.

To test the bit's sharpness, carefully scrape the cutting edge gently across your fingernail (Caution!). The blade is sharp if it scrapes off a little surface of the nail.

If the bit is in need of sharpening you will need a diamond paddle honing stone and water. Four to six passes of the carbide cutter (not the body of the bit) should be enough. A 600 grit paddle is all that is needed for a light touch up. More aggressive sharpening jobs will require a preliminary sharpening with a 325 grit paddle followed by 600 grit.



Diamond sharpening paddles are available in some hardware stores or online at Rockler.com or Woodcraft.com. *From WoodZone*.

ELECTROSTATIC DUST CLOTHS

Traditionally woodworkers have used tack cloths to collect stray dust from a freshly sanded project before finishing. The sticky surface of the tack cloth helps to collect and trap dust when it's wiped over the surface of the wood.

Now there's a new better product on the market - electrostatic dust cloths. These dust cloths are market under various names such as Swiffers and Electra in most grocery stores. They carry a negative electrical charge that help draw dust out of the corners and crevices a normal tack cloth may miss. "Micro-pockets" on the cloth's surface help to hold and trap the dust collected. These cloths are solvent and chemical free so adverse wood finish reactions are eliminated. From *WoodZone*.

FINISH PRODUCT BASICS

When selecting the perfect wood finish it’s easy to become overwhelmed with all of the slick labels and marketing hype. A quick trip to the local home project center will reveal the hundreds of different choices. The term finish is often used loosely to refer to any chemical that is applied to wood. The term actually refers to a clear protective coating that sits on or in the surface of the wood.

Stain, Paint, and Finish are the three primary classifications for common wood treatments. Stains contain pigments and are used to tint the wood. Paints contain colored pigments and sit on the wood to form a protective coating. Some finishes are simply paint with out the pigment that lay down a clear protective coating. There are five common types of finishes on the market. They are: Oil, Varnish and Polyurethane, Shellac, Lacquer, Water-based Finishes

Applying finishes is one part of woodworking that doesn’t require many tools. In fact there are only three main tools used to apply all of the finishes listed above; rags, brushes, and a spray gun. Many professionals will use a spray gun for smooth even coats.

Selecting a Clear Finish. When you are selecting a clear finish it is important to remember the qualities you require from the finish. It must protect the wood. It must be durable enough for the intended application. It should be as easy to apply as possible.

Vapor Exchange. To protect your project for the long term you should select a finish that has a maximum resistance to moisture vapor exchange. Thicker finishes tend to slow down this exchange more. Keep in mind though that thicker might not always be better. Polyurethane is more prone to cracking after 4 or 5 coats. In this case, varnish might be the best choice.

Durability. The durability of a wood finish is an important part of protecting the wood beneath. A durable finish is more important for a tabletop than a mantle or picture frame. Durability has more to do with the chemistry of the finish than the number of coats. For example a single coat of polyurethane is more durable than multiple coats of a water based finish.

Ease of Application. It’ll probably surprise you to learn that the ease of applications is one of the key factors to achieving a professional finish. Slow drying finishes like polyurethane and varnish are relatively easy to apply with a brush. However, their slow dry time leaves them vulnerable to dust landing on the surface and leaving spots. Faster drying finishes can be difficult or impossible to apply without a spray gun. Oil finishes aren’t affected by dust since they soak into the wood.

Now that we’ve covered some of the basics let’s take a look at the different type of finishes. There are five primary types of finishes, a bunch of sub-categories, and a limitless number of brand names for these finishes.

Oil Finishes. These types of finishes have been used for centuries to treat and preserve wood. Oils are different from most other finishes on the market because they seep into the wood and penetrate the wood’s fibers. Because of this, oil finishes cannot be built up to a thick coat like polyurethane or varnish can. They offer less protection but are also easier to apply which is their primary advantage. Another advantage is that simply simply wiping on more oil can often repair minor scratches.

There are two types of oils, those that cure and those that don’t cure. Oils that don’t cure should generally be avoided because that can continue to seep into the wood leav-

ing the surface unprotected. They can also leave a sticky surface on the wood. Linseed oil and Tung Oil are both oils that cure and work well as finishes.

Linseed Oil. This oil is made from the seeds of the flax plant. Look for "Boiled" linseed oil. This product has an added metallic drying agent that helps the finish dry in a day. Linseed oil without this additive can take over a week to dry.

Tung Oil. Pure Tung oil is pressed from the nuts of the Tung tree. Unlike Linseed Oil, this finish does not require drying additives and cures in several days.

Applying Oil Finishes. The primary advantage of using these finishes is their ease of application. Simply wipe it onto the surface with a clean cotton rag, wait 10 minutes, and applying more oil and allow time to cure. Always sand lightly between coats. Linseed Oil generally requires three coats to achieve the "hand rubbed" look. Tung Oil may require 5-6 coats to achieve the same results. The first few coats will tend to cure rough but will even out during the last few coats.

Varnish. Varnishes are one of the most protective finishes available. This level of protection increases with additional layers. The primary down side of varnishes is that they are slow drying which can allow dust and dirt time to settle and damage the finish. Because of this it is best to finish your project in a clean dust-free room if possible.

Varnishes are produced by cooking an oil and mixing it with a resin such as synthetic alkyds, phenolics, and polyurethanes. Interestingly, polyurethane finish is actually varnish made with polyurethane resin to make the finish more protective and durable.

When more oil is used than resin the finish becomes more flexible. This type of varnish is called "Spar Varnish" and is ideal for outdoor use because the flexibility makes it more forgiving of seasonal wood movement.

Applying Varnishes. Achieving a perfect varnish finish is a combination of skill and experiences as well as access to the right tools for the job. Work in a clean dust-free environment. The room should be prepared by wiping it down surfaces with a damp cloth. Also be aware of dust that can be generated by human skin and clothing. The wood should be wiped with a tack cloth and the finish transferred into a separate working container.

Varnish is usually applied with a brush using long steady brush strokes. In contrast to paint varnish brush strokes are much more apparent. Work in the direction of the grain and "tip-off" your brush strokes with lightly brushed vertical strokes. Varnish should be wet sanded between coats with a fine sandpaper.

Wiping Varnish. "Wiping Varnish" that has been thinned with Paint Thinner is also available. Use caution since some manufacturers refer to their wiping varnish as "Tung Oil". Read the labels carefully since these products are completely different. One way to test this product is to pour some of the finish onto a piece of glass and allow it to dry. If the finish cures to a hard finish it's varnish. This product can be applied with a brush like varnish or with a cotton rag like an oil finish. The advantage of wiping varnish over an oil finish is that you can leave some of the finish on the surface and build up to a thicker coat.

Oil/Varnish Blends. Just to make thing a little more confusing the finish manufacturers introduced a blend of varnish and tung or linseed oil. These finishes are applied and act similar to an oil finish but the varnish adds some additional protection. They will still cure in the wood like an oil finish and should not be used if you plan on building up layers on the surface.

Shellac. Shellac is one of the few natural resins still in use today. Although not as durable as a Lacquer or Varnish, shellac still provides a modest amount of protection. Shellac is not the best finish for tabletops, chairs, and kitchen cabinets due to high wear requirements of these items.

The big advantage, and the reason the finish is still in use today, is that Shellac is alcohol based which makes it very fast drying. Because Shellac is fast drying it is less likely to collect dust like varnish. It is often too thick to apply with a brush and requires thinning with denatured alcohol before it can be brushed. This finish also requires that you work fast with your brush and maintain a wet edge.

It is available in a range of colors from clear to an orange/amber color. Orange/Amber shellac is known for the warm tones it gives wood. Shellac breaks down over time, so be sure to purchase a fresh can, and don't use anything over a year old.

Lacquer. Lacquer is used most often in furniture factories because its fast drying properties reduce dust related finish problems. It is usually applied with a spray gun although "brushing lacquers" that cure slowly are also available. If you choose to spray a lacquer finish be aware that the fumes are hazardous to your health and the dry dust can be explosive.

Water-Based Finishes. Because of increasing environmental concerns a new class of finished has been developed. These "Water-Based" finishes are often marketed as "polyurethane", "varnish", or "lacquer" which is untrue since all of these finishes are solvent-based. You can tell if a finish is water based because the can should mention "water cleanup" as an added feature. "Water-based" finishes are basically latex paint without a pigment. The two primary downsides are that they tend to hold visible brush marks and are less durable than the more conventional finished. They also tend to bubble with brushing. You'll want to use a synthetic bristle brush and try not to overbrush the surface. Also try to avoid temperature and moisture ranges that exceed indoor conditions. Moisture or temperature ranges on either end of the scale can cause drying problems.

Sanding your Finishes. Properly preparing your finish between coats is an important step. With finishes that require building to achieve a thick coat it is extremely important to sand with fine sandpaper between coats to remove bumps and high spots. Wet sanding with special "wet sanding" paper is an excellent way to smooth out the surface without creating lots of airborne dust, which could land, in your next coat of finish. The best advice we can offer is to test your finishing techniques on a piece of scrap wood before you move on to your recently completed masterpiece. *From WoodZone*.