Making a Silk Purse from a Sow's Ear

Herman de Vries, (www.hdv.net)

There has been a lot of discussion on this site (WoW) about stabilizing soft wood so it can be turned. All of us have encountered very nice pieces of wood made virtually unusable by a soft spot or two, or a tearout prone piece of wood.

There is a saying, "you can't make a silk purse out of a sow's ear". Maybe that used to be true, but with modern technological advances, it just might be possible.

This is a series of photos about how it might work. I will state up front that I am NOT an agent for Polyall 2000. I ran across the product at Lee Valley (they no longer carry it, and I quickly was sold on it. I now buy it direct from the company at www.polyall.com

Here's the illustrated story.

Bernice said, "Why is that bowl in your firewood pile?"

She and Clem were over for dinner and we were lounging in front of the fire, enjoying some drinks, when she asked the question.

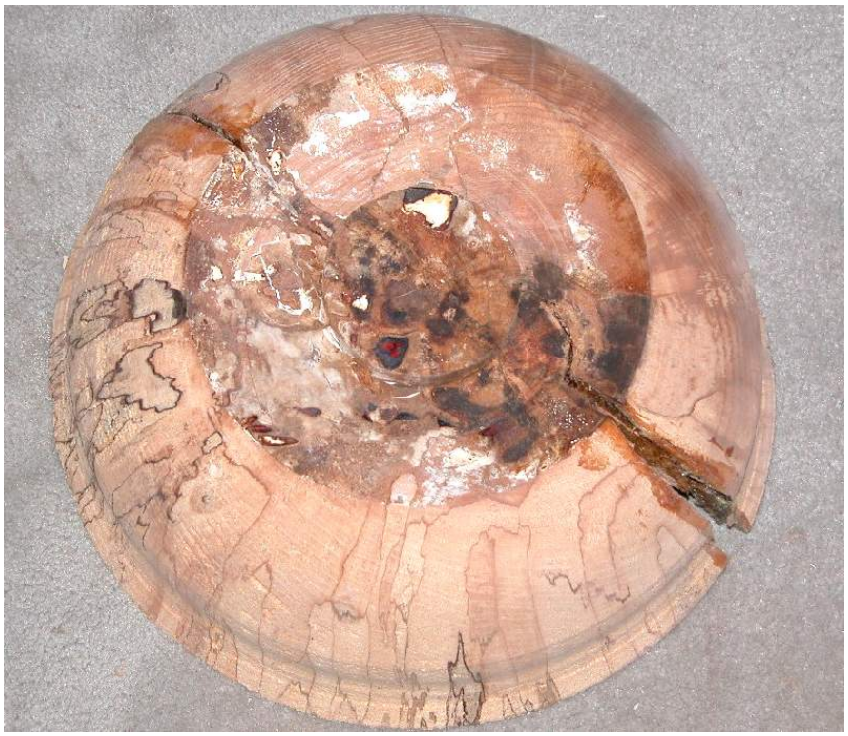
I said, "it's ugly and impossible to work with."

I picked it up and showed her how the wood would just flake off in chunks with a fingernail. I told her there was no tool sharp enough to work with the wood - even sandpaper would tear it out. It just crumbled.

She thought it was a shame that such pretty markings in the wood was destined for smoke and ashes.

Her comments got me thinking that I have touted the merits of Polyall for a long time and that this dilapidated piece of wood might make a good candidate for a series on how a turner can "save" something like this using Polyall. So here it is.

You can tell from the first two photos that I had started with wet wood, and tried to keep it together and failed. It split, even though so much of it was rotten.



A close up of the rim, prior to treatment. Even with an extremely sharp tool, some of the wood flaked out almost to a ¼" depth.

A close up of the interior wall. Same as the wood in picture above. Completely impossible to turn.

Here is the bowl with the cracks now filled with West systems epoxy resin. The bowl has to be quite thick for this to work.

I always use several layers of masking tape on the outside of the crack as a dam to keep in the resin.

First I pour the resin into the cracks on the bottom of the bowl until the crack was full at the bottom. Then I cover the crack with the resin in it with masking tape and run the tape up the inside of the bowl, leaving the top open. I then pour the crack full from the top, and the masking tape holds the resin in the crack until it sets up.

Use plenty of tape and spread it well out beyond the crack. The resin will seep underneath it, so make sure the tape is stuck down. I use the rounded end of a dowel to work the tape hard against the wood. You could probably use a bead of silicone and cardboard if you are not as impatient as me.

This is the bowl ready to turn. It has not yet been treated with Polyall. That will come after it is within ¼" or so of the finished thickness on both the inside and outside. In other words, I will want to reduce both the inside and outside by another ¼" after applying the Polyall. On this wood, it will penetrate at least 3/8", so if I leave the wall at 3/4" I will end up with a finished wall of about ¼".

Now the bowl has been turned down to about 3/4 inch and is ready for treatment. The surface is still as rough as it was before, but you can see how the resin held the piece together and made it possible to shape.

A shot of the outside after turning. The tearout is just as bad on the rotten wood.

This is the Polyall product. I get it from the company at http://www.polyall.com

1.9 liters of it is about $60 Canadian. I get the large size because I use quite a bit of it, and it's shelf life is excellent as long as you make SURE to keep the products separate and clean the lids and tops the can EVERY time you use it. I put a black magic marker line on the lid, the can, and the little mixing cup, just to make sure I use the same ones every time. I bought these cans a year ago and they are still perfect.

Whatever you use to apply Polyall will have to be thrown away, so I make up a "dabbing" pad by taping a chunk of foam to a Popsicle stick.

SAFETY FIRST - Always use gloves, a vapor mask and eye protection. This is a powerful product and has a smell to match, so use good ventilation. The mask is also a must when you are turning, and especially when you sand.

It is invisible in the finished product, as long as you don't let it set up. It is as thin as alcohol and penetrates instantly, but will set up in a couple of minutes. As soon as it starts to thicken you are running out of time. If it starts to cloud, stop using it and mix a new batch if you haven't finished.

All of this means that you mix it only when everything is ready to go. I learned the hard way to keep it away from the gears of your chuck, even though it flakes easily off metal.

Dab it on, moving fast. I did the outside first, immediately turned it over and just poured it into the inside, tilting the bowl to disperse it. Then I quickly dabbed it into the sides of the inside. For the rim, I mixed a new small batch and dabbed it right into the top of the rim. To do this bowl took three of the mixing cups of each of the solutions. They are mixed in a ratio of one to one.

Turned and finished. The finish on this is Deft lacquer, thinned 50/50 and applied and then rubbed on with a paper towel. As you can see, there is not a trace of the Polyall, although I doubt if an oil finish would work. A surface film is probably all you can do, like lacquer or urethane. If anyone has ever tried a Danish oil maybe they can let us know if it worked. I haven't gotten around to it.

The inside of the bowl. Not a trace of tearout on any of this piece. The thing to remember about this is that the ENTIRE bowl is made of punky wood. Most of the time, your piece of wood will only have a couple of spots of punk or soft wood, or tearout.

The product also works well on firm wood that is subject to tearout.

A closer shot of the rim. Remember how rough the rim and inside wall were in the initial pictures?

Would you recognize this rim shot as being the same place as picture 3 of this series?

Finally, this is what the resin looks like. The glitter works well with this bowl. Even though it is only useful as a fruit bowl or decorative bowl, (definitely NOT a salad bowl - you would never use this type of product on a food serving piece), the glitter adds a bit of interest to it. When you hold it up to the light, the resin is almost transparent except for the bits of glitter floating in it.

Contact me at herm@hdv.net if you have any specific questions about it.

Herm