Worthless Wood Blanks?

A Tutorial by:

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Worthless Wood Blanks?

Salvage Unusable Wood Blanks with Pressure Casting

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If you cut your own wood pen blanks then chances are you have quite a few that are not useable because of large voids or so many cracks that CA is not a repair option. This tutorial will show you a method of using resin to fill in these defects and create an enhanced pen blank.

Here are a couple of examples of pen blanks that are pretty much worthless since the voids are too big to easily fill with CA.


This is a Live Oak Burl with quite a bit of missing wood (close-up on right)


This is a Mescalbean blank that is almost in 2 pieces (close-up on right)

Start out by first cleaning any loose material from the void. An air gun and dental pick make great tools for this job. Make sure the wood is completely dry to avoid any problems with the resin. A toaster oven set to low temperature for a few hours will dry the blanks nicely if need be. Once cleaned and completely dry, they are ready to be placed n the mold

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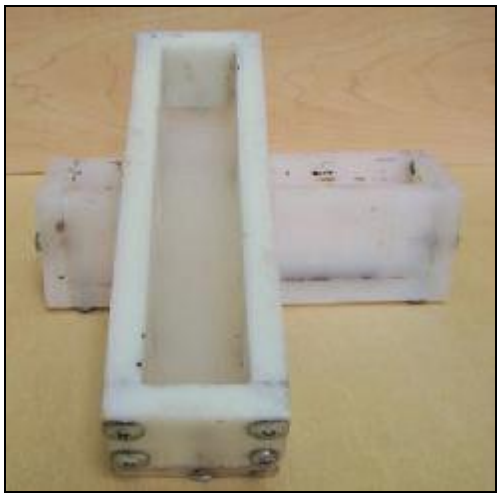

Molds are easily made out of white plastic cutting boards and screws. Rip the cutting boards on a table saw and then run the pieces through a planer to remove the texture they usually have. Then drill pilot holes and assemble with screws so you can easily take one end off to remove the blank after the resin has cured. Be sure to make the mold tall enough so you don't have to worry about the resin spilling out while transferring to the pressure pot.

Use a piece of wood on edge taped to the mold to keep the blank from floating once the resin has been added.

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A really good resin for casting is Alumilite Water Clear from Alumilite Corporation. This is a 1:1 ratio urethane resin that requires equal parts of "A" and "B" by weight. A single blank mold with a typical blank to repair takes approximately 2 ounces of mixed resin. Obviously you will need more resin if you make molds that allow you to do multiple blanks at one time. With Alumilite you will need .54 ounces of mixed resin per cubic inch of mold space. To determine how much you will need, use the formula length x width x height x .554. Be sure to subtract for the volume already filled by the blank itself.

Using a small postal scale is a good way to insure accurate resin measurement. Zero out the scale with the cup on top so you don't have to remember to subtract the cup weight!

Metal powders from Alumilite or Mona Lisa Products added to the resin will add depth and helps the resin blend nicely with the wood.

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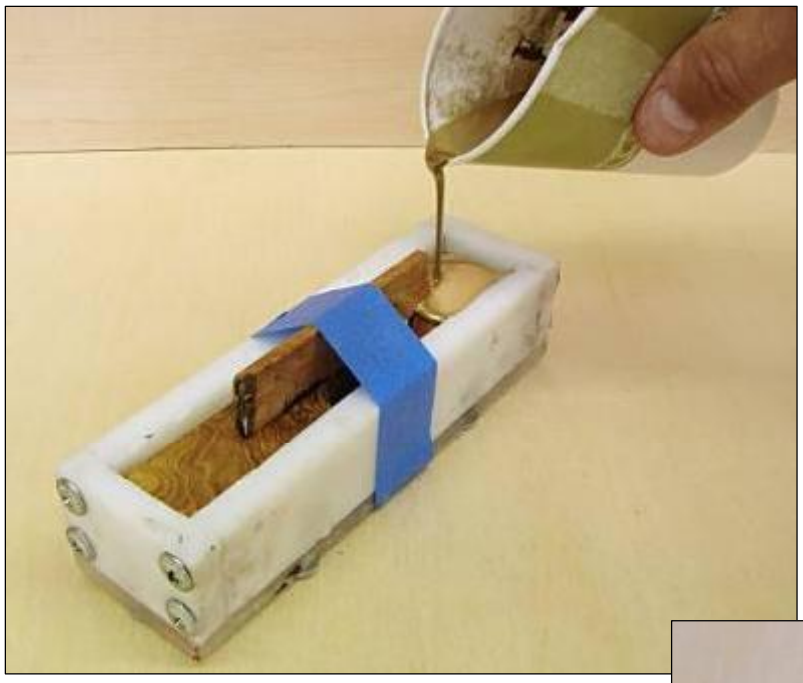
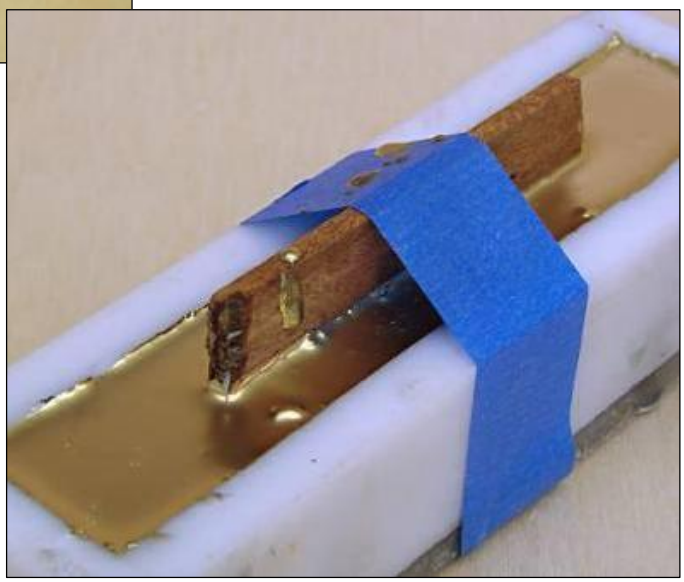


Pour the mixed resin into the mold, being sure to completely cover the blank. This is important so you will have enough once the pressure has been added and the resin has been forced into the cracks and crevices.



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A Harbor Freight paint pressure pot is easily modified into a pressure chamber by removing some of the tubes and plugging others. Installing a cut-off valve at the inlet will allow you to pressurize the tank and then remove the air hose while the resin cures

This is an example of a rack that was made to fit in a Harbor Freight pressure pot. It has a handle on top that folds down so the lid closes properly and a piece of hardboard to act as an air deflector. If you make a similar rack, be sure you do not leave off the top piece or you can end up blowing resin all over the inside of your pot!

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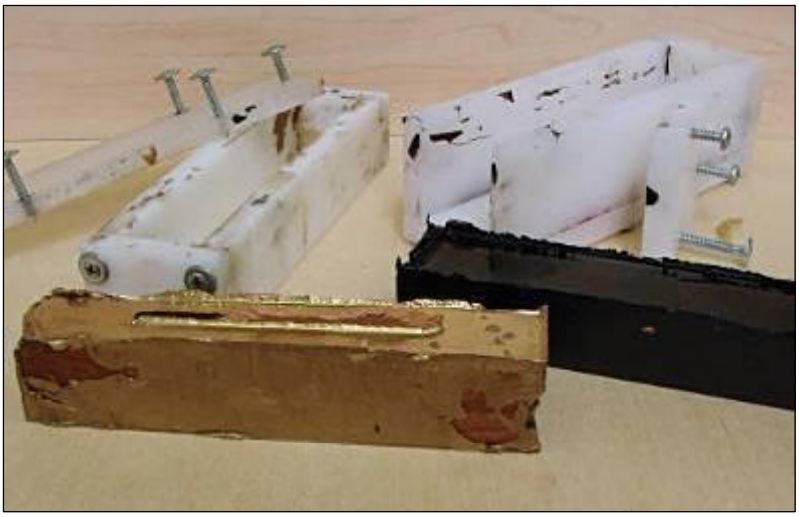
Pressurize the chamber to 60 psi and hold it there for roughly 15 minutes if using Alumilite. (Polyester resin may take significantly longer). Some pen blank casters are using less pressure for straight resin blanks or snake skins but higher pressure is called for here to force the resin into the smallest cracks and crevices.

Remove the blanks from the mold once the resin has cured.



The blanks can be turned just as they are it is preferable to run them through a table saw or band saw first. This will allow you can see what you are working with and how to best layout the pen to take advantage of the beauty of the blank.

The one in the back was cast with black Alumilite resin and is the Live Oak Burl shown earlier. The one in front is the Mescalbean and has been cast with clear Alumilite with gold Mona Lisa powder.

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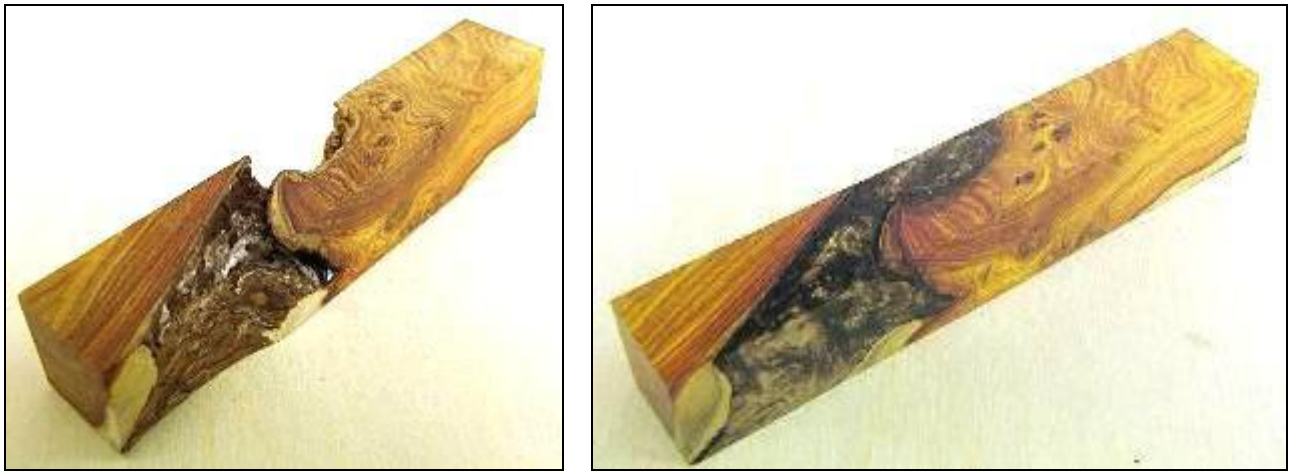
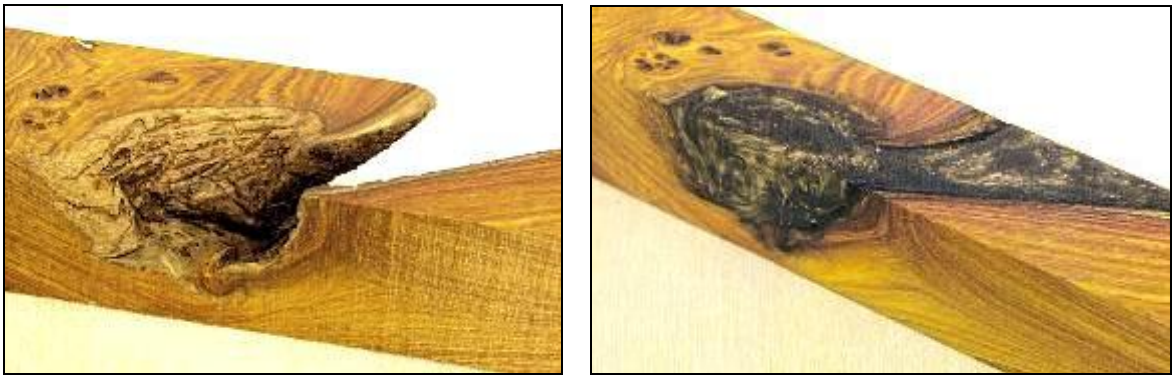
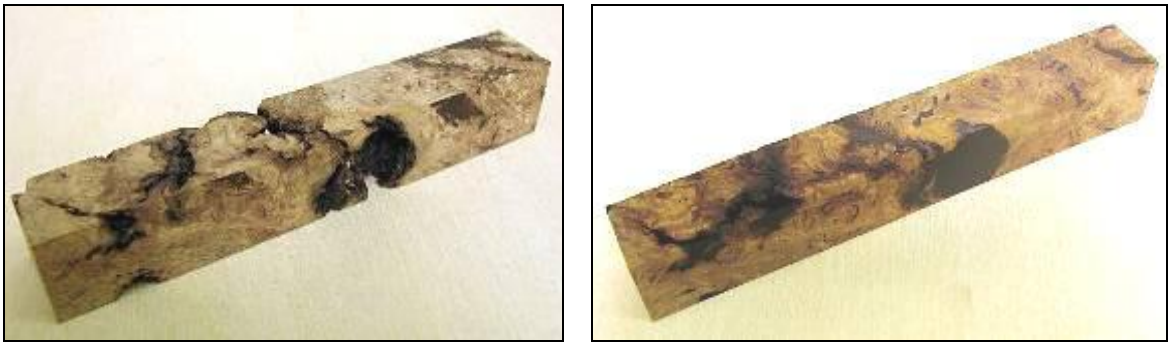


Mescalbean before (left) and after (right)



Mescalbean close-up before (left) and after (right)



Live Oak Burl before (left) and after (right)

The finished blanks can be drilled and turned just like any other blank. You will be amazed at how deep the resin penetrates and how it will fill most of the smallest cracks. You may still find a few very small voids deep inside but they are easily dealt with by using CA.

Pressure casting your unusable wood blanks allows you to make some really striking combinations of wood and resin while also salvaging blanks that would otherwise be lost to the landfill. The process is fun and rewarding to see how you can complement nature's masterpieces.

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