

End Trimming Polymer Clay Blanks

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I asked Toni to make some tubes for me that I can use for testing purposes. In this series we will be doing destructive testing and presentation to show various things like durability, tips, tricks and what not. So when you see damage to the tube don't worry or be upset as that is the fate of these tubes. They will get damaged to show various aspects and to teach that these tubes are stronger than you think they are.

This is the first in this 'series'.

There are many methods to perform this step and this is just one of them. I find it is fast, easy, efficient and very effective as very little work is needed.

Lapping

Quote:

Lapping is a method of smoothing an item by working it back and forth over an abrasive medium such as carborundum grit. The technique is used for grinding telescope mirrors, smoothing automotive engine valve faces and can be used to smooth metal parts to just about any desired level of surface finish.

A convenient method of lapping in the home shop is to use wet-dry sandpaper supported on a smooth surface such as plate glass or a flat piece of 1/2 aluminum plate.



I use the bed of my lathe and Abranet for this lapping job. You can use flat plates of glass, tile, or any flat hard surface material.

This is a reference point as any imperfections will bleed over to the lapped surface on the tube.

Let's Begin

The first thing you do is put the bushing on one end of the tube. Put a light source behind the bushing and tube joint and look for cracks of light.

If you ***DO*** see light, and you will in most cases, this means there is a low spot. When you hold the bushing and rotate the tube the crack of light will change and you can easily find the high spots. The high spots are areas that do not show light.



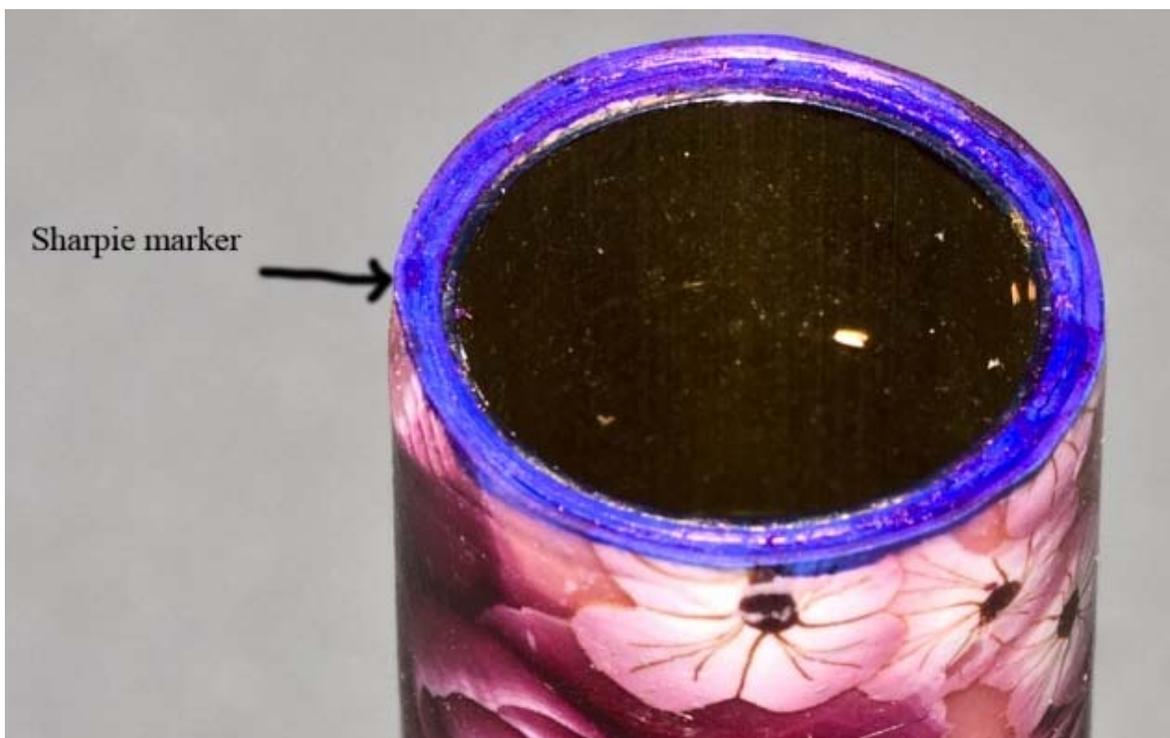
Note 'V' shape.
Light shining = low spots!

When properly trimmed there will be ***NO*** visible light.

A smooth GENTLE even lapping stroke is all that is needed. I use 1,200 grit wet/dry sandpaper.

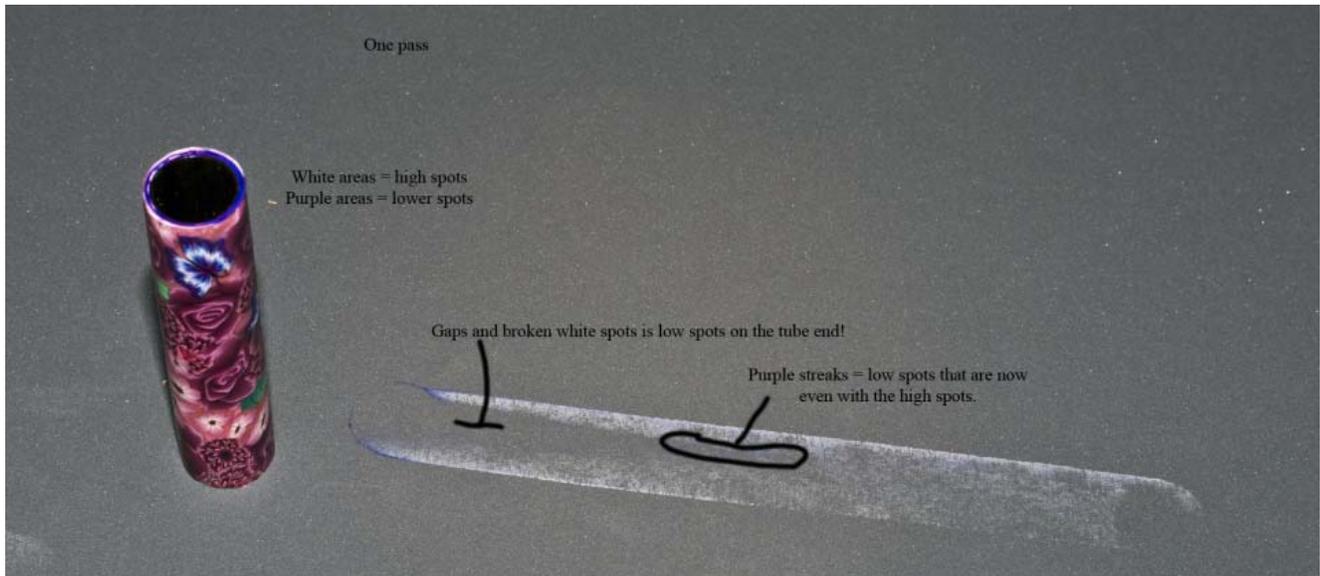
We do not need to be fortune tellers to be able to read the sandpaper to learn what is going on.

If in doubt you can break out your sharpie maker (permanent marker) and mark and cover the end of the tube. That way you will see very clearly what is going on and where.



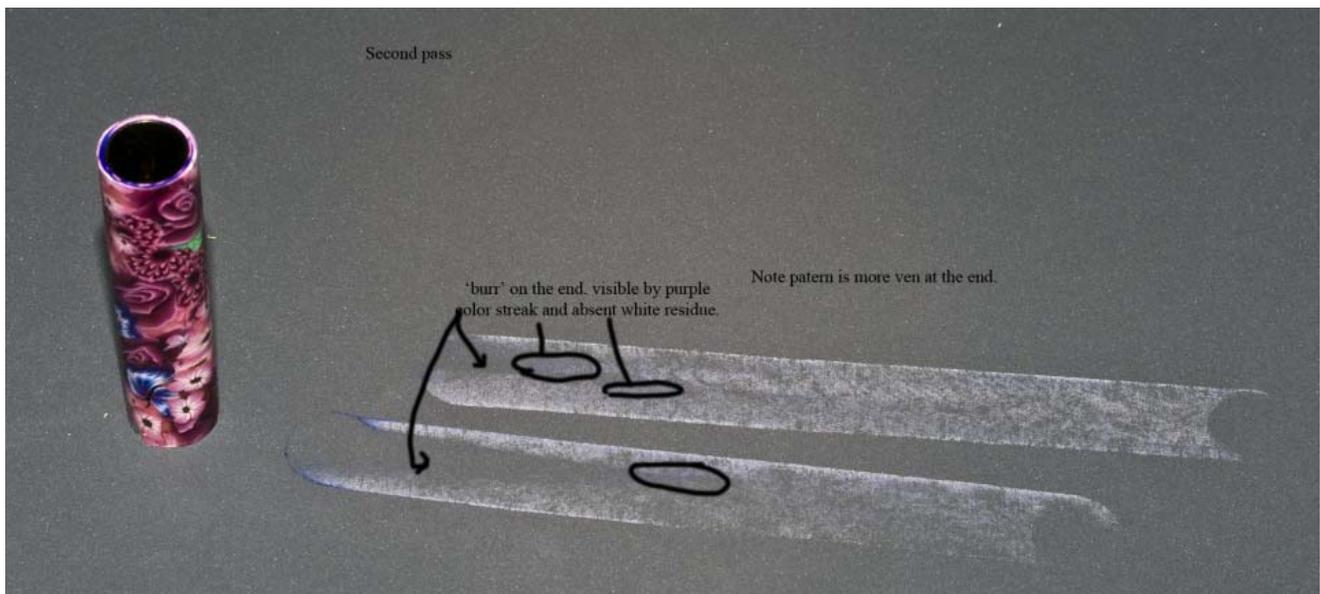
One Pass

Let's do one lapping pass at the end of the blank on the paper and then read the paper.



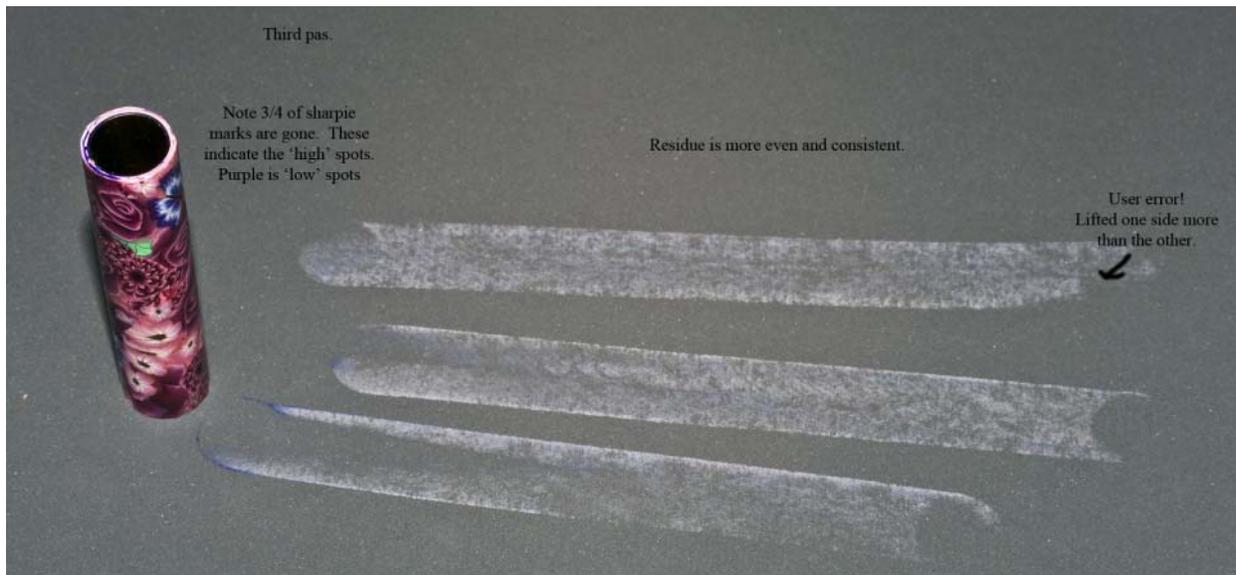
Worth noting, look at the tube; see the purple spots at 3 and 9 o'clock position. Then look at the residue marks on the paper. See the gap in the middle? That is where the purple (low) spots are on the tube.

Two Passes



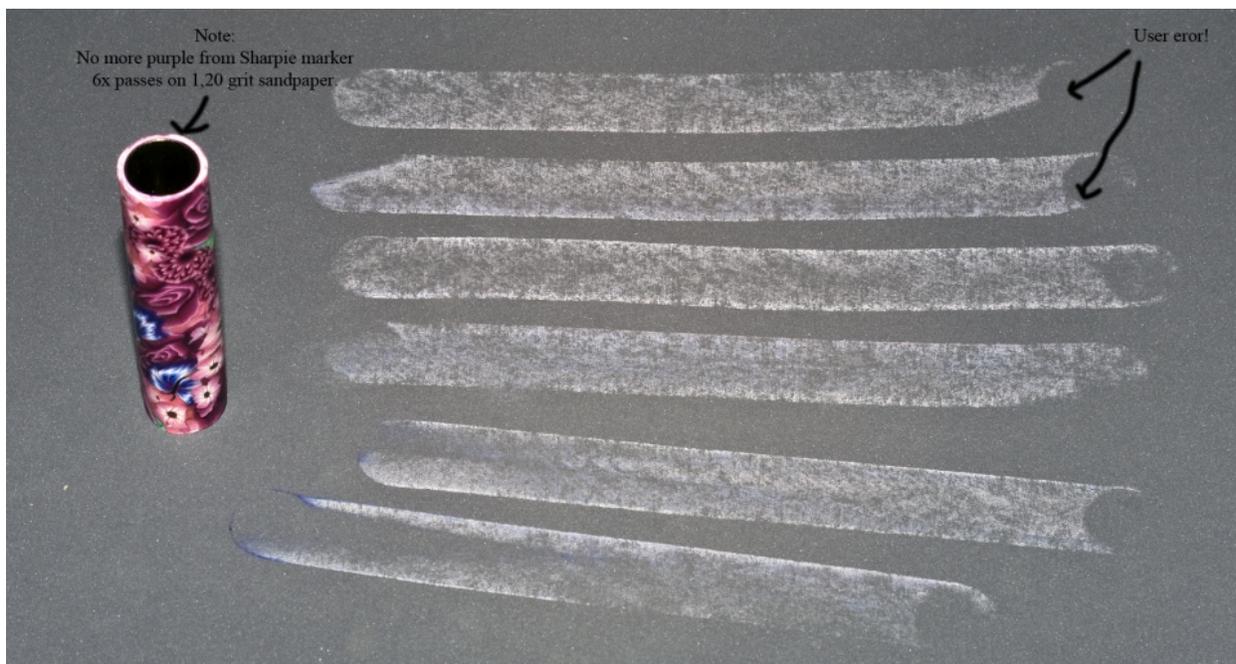
Also worth noting, it took 2 passes to remove the bulk of the low spots. The gaps we saw with 1 pass are mostly gone.

Three Passes



Ok, technically I think we could call it at this point but there are some ever so slight low spots. So I am going to continue. A few more passes...

...Six Passes



Here we clearly see it took 6 small passes on 1,200 grit sandpaper. Using a very LIGHT and GENTLE touch and only left to right motion to trim the end. We have NO purple remaining on the tube. The paper tells us we have smooth fluid even residue marks, no purple spots and no gaps. The only remaining thing to do is check as in [Step 1](#) with the bushings again to ensure there are NO low spots.

Notice the 'user error' that are in the photo's. They are from the tube being uneven to the paper. In this case was when I was lifting the tube at the end. Knowing this we can see that I screwed up on pass #1, 3, 5 and 6. Since they are at the very end there is little damage but this damage does increase vastly with the more pressure you apply.