Leather vs Balsa strops

Posted by WayneNicklin - 22 Jul 2012 07:41

Can some one explain to me when one material is more appropriate than the other in terms of stropping? So far been only using leather with various micro grits and seeing some amazing results.

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Re: Leather vs Balsa strops

Posted by PhilipPasteur - 23 Jul 2012 23:03

I should have added...

under water... water and the speed attainable moving under it... bring a whole new dimenssion to the discussion...

Anyway, I have a hard time keeping my chain sharp...and I use the saw about 5 times per year...

Hit the dirt or sand one time... you are hosed...

No Chosera 10K need apply !!!

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Re: Leather vs Balsa strops

Posted by mark76 - 25 Jul 2012 03:10

I've been doing a lot of experiments in which I compared, among others, leather strops and balsa strops. You can find the results on my blog .

The obvious differences between leather and balsa are that:

- leather affords more than balsa, which is very stiff
- leather has more draw ("stiction") to it than balsa, which is very smooth

The fact that leather is less stiff than balsa makes leather more suitable for turning a multi-beveled edge into a convex edge. Clay has done a few videos on that and you can find a few posts about that on my blog.

If you don't want to convex an edge, but simply strop a final bevel, the stiffness differences between balsa and leather are negligible as far as I have been able to observe. For example, on the WEPS, a leather strop kept the edge of the edge just as straight as a balsa strop.

You can use the fact that leather has a bit more draw to it than balsa if you wish to create a mirror edge. To create such an edge, it is more important to burnish the edge than to abrade it. The draw leather has to it aids in burnishing. However, the Wicked Edge stropping pastes already provide a lot of draw themselves. So if you use these pastes, the difference between leather and balsa in this respect becomes less important. Some of the pictures on my blog show that balsa can get an incredible amount of "stiction" if you use these pastes. Also see a recent topic by Clay on the different effects of stropping (abrading, burnishing, honing).

A less obvious difference between leather and balsa are their own abrasive qualities, i.e. their abrasive qualities when used without any stropping compound. Clay has posted some pictures (perhaps in the thread Philip referred to; I cannot find them back immediately) of the effect of a leather strop on a nearly clean edge. It appeared that leather (at least the leather used for the WEPS strops, which I think is quite smooth) has abrasive qualities of its own in the submicron range. I cannot say whether these are relevant already when you use a 1 micron compound, but when you're at about 0.5 micron, these are almost certainly relevant.

So indeed, balsa is probably more suitable at the submicron level. However... I don't know how effective balsa is with diamond sprays in these ranges. The space between the ligaments balsa is made of is apparently about 0.5 micron. So if you use a submicron compound, the abrasive particles may partly disappear in the "crevices" between the ligaments. Obviously, not all particles will disappear in these crevices, but this may make balsa less effective. But, as I wrote, I just don't know. If anyone knows about any experiments in this area, I'd be happy to know.

I nowadays use a special cloth mounted on aluminium when I strop at the submicron level. This cloth is fabricated specifically to hold tiny particles in place, but not to cause any abrasion by itself. I am quite happy with the results, but cannot substantiate it with any microphotographs.

Fortunately Clay now has a 2000x microscope 🙂

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