Conservation of Metal

Posted by wickededge - 09 Nov 2012 16:02

I just completed a fun study with two identical Shun Santoku knives. I'm off to CIA and Warren Cutlery next week to show them the sharpener and I wanted to have a nice comparison of the Wicked Edge vs. a higher end electric sharpener. I took micrographs and measurements of the knives before and after and here is how it turned out:

Factory edge at 500x:

Coarse Stage Electric:

Ceramic Stage Wicked Edge:

For the coarse stage Wicked Edge, I used the 600# diamonds and then the 1600# ceramic stones.

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Re: Conservation of Metal

Posted by wickededge - 09 Nov 2012 16:10

Fine Stage Electric:

Fine Stage Wicked Edge - 1 micron strop

Knife Measurements:

The Wicked Edge removed almost no metal since I was essentially matching and cleaning up the factory bevel. The electric unit removed more than .02" of metal along most of the blade length. At the extreme, the electric unit would remove as much as .2" of metal for every ten sharpenings, assuming the coarse stage was used each time. Use of the fine stage only would of course remove less metal at each iteration.

Methodology:

For the electric unit, I followed the factory directions to the letter and the total sharpening time was just under 5 minutes. For the Wicked Edge, I set the bevel at 16 degrees per side, appropriate to the knife, and started with my 600# diamonds and finished the first stage with the the 1600# ceramics. The total sharpening time was just over 5 minutes to this stage. I spent an additional 1 minute stropping at 1 micron.

The knife after the electric unit is not very sharp and slides easily along my thumbnail. The Wicked Edge sharpened knife bites in immediately. The difference is due both to the angle and the refinement of the edge. The electric unit only allows sharpening at 20 degrees, very contrary to how Shun builds their knives. With the Wicked Edge, making perfect 16 degree bevels is a cinch.

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Re: Conservation of Metal

Posted by 4jlcc - 09 Nov 2012 17:05

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Love those last two fine edge comparison photos Clay. What a difference!

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Re: Conservation of Metal
Posted by razoredgeknives - 10 Nov 2012 17:43

Wow! What a difference! I can't believe you did that in just 5-6 minutes... Takes me muchllonger, lol. So you said you matched the angle at 16*/side?

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Re: Conservation of Metal
Posted by wickededge - 10 Nov 2012 22:03

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razoredgeknives wrote:

Wow! What a difference! I can't believe you did that in just 5-6 minutes... Takes me muchllonger, lol. So you said you matched the angle at 16*/side?

Yes, just matched it so it went really quickly.

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Re: Conservation of Metal
Posted by mark76 - 11 Nov 2012 06:14

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razoredgeknives wrote:

Takes me muchllonger, lol.

When I first saw the Wicked Edge videos Clay made I thought these videos must have been heavily edited. Now I know Clay is the fastest sharpener in the world.

Having a Wicked Edge helps. Being the inventor, too

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Re: Conservation of Metal
Posted by coryschnaufer - 12 Nov 2012 00:19

If you read the post he didn't reprofile and started with a good bevel of 16. I can see this taking five minutes using only 600, 800, 1000, then the ceramics. I don't know about most other people but once my

reprofile is good it doesn't take long to go through the rest of the stones. Maybe 50 to 75 strokes per stone and if you have a good rhythm that takes less than a minute. Then an additional minute stropping sounds right also. It is the reason I really love this sharpener. As long as I have done the knife before it is a 5 minute ordeal to get it back to tip top shape. This is an amazing tool and I thank Clay every time I use it.

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Re: Conservation of Metal

Posted by mark76 - 12 Nov 2012 04:18

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coryschnaufer wrote:

If you read the post he didn't reprofile and started with a good bevel of 16.

That's a good point. When I sharpen knives for friends, family, neighbours, ..., I usually first reprofile them at an angle I think is appropriate. Fortunately I was smart enough write down the angles and the clamp positions. Now they come back for touch-ups. That's a breeze...

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