Leading or Trailing Strokes

Posted by wickededge - 21 Aug 2012 16:45

I did a quick experiment with the .6 Micro-Fine Ceramic stones and edge-leading and edge-trailing sharpening. First I polished the edge .25um with the kangaroo strops. Here is the clean edge:

I didn't go for perfect, just good enough to have a clean slate.

Next I did 5 very light trailing strokes with the .6um Micro-Fines at 5 degrees wider. Here is the result:

I did another 20 strokes, edge-trailing:

==========

Re: Leading or Trailing Strokes

Posted by wickededge - 22 Aug 2012 08:42

It's just an unspecified high carbon steel - I'm using a bunch of utility blades so that I can easily compare apples to apples in different sharpening sessions. I don't know anything about the hardness. I agree about the burnishing and I find it really fascinating that leather can do it so easily.

PhilipPasteur wrote:

Clay,

What kind of steel is this blade and what hardness was it tempered to, that you used for this round of tests?

BTW, even though it is not constructive in this case, this sort of deformation or "plastic" flow of the metal is what burnishing is all about (what I have fixed in my head that it is anyway).

This is why I ask about the type of steel and the hardness. It looks more like plastic that has been partially melted than steel

Phil

==========

Re: Leading or Trailing Strokes
Posted by PhilipPasteur - 22 Aug 2012 08:46

Well, in the case of these pictures, was that not done with and by the ceramic stones.

You did get rid of it with the srops though...

Phil

==========

Re: Leading or Trailing Strokes
Posted by wickededge - 22 Aug 2012 09:11

Yes, in these pictures the deformation we're seeing is from the ceramics. I'm about to clean the edge back up and then repeat the edge leading photos.

PhilipPasteur wrote:

Well, in the case of these pictures, was that not done with and by the ceramic stones.

You did get rid of it with the srops though...

Phil

==========

Re: Leading or Trailing Strokes
Posted by wickededge - 22 Aug 2012 09:43

Here is another shot of the blade as I left it last night after the 20 edge-leading strokes:

I cleaned up the edge again with the .25um kangaroo strops, 20 strokes per side. Again I'm impressed by how well it works. Here is that picture:

I then went on to edge-leading with the .6um Micro-Fine Stones using ultra-light pressure. My technique was to just rest the stone on the blade and let gravity pull it down and using my hand to guide the direction and speed so I wasn't applying any force in the direction of the blade. Here it is after 5 strokes:

Here it is after 20 strokes with ultralight pressure:

and another 20 strokes with firm pressure:

==========

Re: Leading or Trailing Strokes

Posted by cbwx34 - 22 Aug 2012 10:02

_____

wickededge wrote:

Clearly a big burr (you know, about 4 microns or something) was formed.

Haha... I do forget the magnification we're looking at these sometimes...

I'm looking at them this a.m. on a big screen tv. (god bless modern technology).

Now I'm wondering if it's possible, to take a shot of the edge looking straight down... to see if that shows any differences between the edge trailing vs. edge leading edges?

==========

Re: Leading or Trailing Strokes

Posted by wickededge - 22 Aug 2012 10:06

_____

cbwx34 wrote:

wickededge wrote:

Clearly a big burr (you know, about 4 microns or something) was formed.

Haha... I do forget the magnification we're looking at these sometimes...

I'm looking at them this a.m. on a big screen tv. (god bless modern technology).

Now I'm wondering if it's possible, to take a shot of the edge looking straight down... to see if that shows any differences between the edge trailing vs. edge leading edges?

Funny you should mention that - I was just working on it this morning and modified my jig to allow the blade to sit up vertically under the scope. It's hard to find the edge but once I do, I can focus on it fairly well. I did some measurements and got and edge thickness of between .45um and .29um with the Mirco-Fine .6 stones at 28 degrees.

==========