Rigotti Knives and Chatter

Posted by wickededge - 27 Jul 2012 09:00

Robert sent me a Rigotti which was giving him a lot of chatter while sharpening. I worked on it for several hours with the diamond stones, ceramics and strops but couldn't get rid of the chatter. Under the 60x loupe I could easily see a very ragged edge which was also easily discernible with a sharpness tester. No matter how long I worked, how gentle I was etc..., the edge remained ragged. The diamonds and hard ceramics were pulling chunks off the very edge. This morning I got my 800# and 1000# Choseras wet and went to work. In three minutes I had a perfect, chatter-free edge that looks great at 60x. The next step is to look at it under higher magnification and then test it out on the reeds. I wish I'd photographed it before switching to the Choseras so everyone could see the difference. I'll report back with photos and more results as I progress...

==========

Re: Rigotti Knives and Chatter

Posted by wickededge - 27 Jul 2012 09:25

Some Images

Here is the edge after the 1k Chosera Stones at 800x:

Zoom

and here it is again after 10 strokes with 1um Diamond on Leather strops:

Zoom

Clearly the leather cleaned up the edge very quickly. I should have lowered the angle 1-2 degrees per side before stropping to not get as much rounding at the very edge.

I've got my 2k and 3k stones soaking and will do those next!

==========

Re: Rigotti Knives and Chatter

Posted by cbwx34 - 27 Jul 2012 09:44

What was the reason for the chatter? Thin blade?

Also, was there any issues mounting the blade? And what angle did you sharpen at?

==========

Re: Rigotti Knives and Chatter
Posted by wickededge - 27 Jul 2012 09:58

Mounting the knife was very easy - there are nice parallel faces and a clear grind line for indexing the depth - the blade is too narrow to use the depth key so I just aligned the grind line with the top of the vise. The chatter was from all the gouges in the edge as the diamond and ceramics were tearing out large (at least at 60x) chunks from the edge. I was using 21 degrees on the left and 23 degrees on the right.

cbwx34 wrote:

What was the reason for the chatter? Thin blade?

Also, was there any issues mounting the blade? And what angle did you sharpen at?

==========

Re: Rigotti Knives and Chatter
Posted by wickededge - 27 Jul 2012 10:18

Here is the knife sharpened with the 2000# Choseras:

Zoom

and again with the 3000# Choseras:

Zoom

==========

Re: Rigotti Knives and Chatter
Posted by mark76 - 27 Jul 2012 10:35

Wow, those pictures are drop dead gorgeous! I'm wondering, though, why the diamond and ceramic stones tore out chunks from the edge and the Chosera's don't.

==========

Re: Rigotti Knives and Chatter
Posted by StevenPinson - 27 Jul 2012 11:24

Clay,

I have found that going with higher grit stones (i.e. 10k and up) give a "damped stroke" and produces a keener edge (IMHO). Also, keeping them damp with DI and clean helps tremendously.

==========

Re: Rigotti Knives and Chatter
Posted by wickededge - 27 Jul 2012 12:40

---

mark76 wrote:

Wow, those pictures are drop dead gorgeous! I'm wondering, though, why the diamond and ceramic stones tore out chunks from the edge and the Chosera's don't.

I think the difference is in the hardness of the abrasives and how they're bound in the matrix.

==========

Re: Rigotti Knives and Chatter
Posted by wickededge - 27 Jul 2012 16:50

Here is the knife sharpened with the 3k Chosera stones and then stropped lightly with the 1um diamond and leather strops:

Zoom

==========

Re: Rigotti Knives and Chatter

Posted by wickededge - 27 Jul 2012 16:57

_____

All the chatter has been eliminated and I can run the sharpness tester along the edge and feel no bumps at all. It is scraping reeds exquisitely and although I have no real experience with reed making, I can tell the the control reed makers will have is very fine.

Overall, I think the Rigotti knife I got to play with has some flaws in the heat treatment making it very brittle, especially in a one inch section along the middle of the blade. Using the Chosera stones, I was able to overcome the problem and create a very straight, refined edge.

==========