Ascending Stone Progression at 800x

Posted by wickededge - 17 Aug 2012 11:46

Here is a fun study I started this morning - I'm taking a series of identical blades through the different stones I have. I started with the 50# diamonds and so far have progressed up through the 1um strops. So, without further hesitation, here are the images:

50# Diamond Stone

Zoom

80# Diamond Stone

Zoom

It's difficult to clean the edge of the blade since it's so toothy and snags just about everything it touches. There is some residue on the edge, especially in the 50# image.

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Re: Ascending Stone Progression at 800x

Posted by wickededge - 19 Aug 2012 14:49

ApexGS wrote:

Interesting info on rounding the edge a little. Would it be advisable for some situations to back off the arms a degree or so if you wanted to maintain really sharp geometry? I'm playing with an old Imperial filet knife as I type this and just finished the 1000 grit diamond stones, so it's strop-ready. I'm curious to know if there would be a benefit to backing it off a little or just stropping normally.

I would guess that at a slightly shallower angle the tiny facet from the new profile would blend in better as well, but I haven't toyed with much on my new kit yet

One of the things that I found really interesting is that I still experienced rounding with stropping after lowering the angle by two degrees per side. I'll try the experiment again at 3 degrees lower per side and

so on until I find the setting that allows me to just reach the edge without rounding.

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Re: Ascending Stone Progression at 800x

Posted by wickededge - 19 Aug 2012 14:54

Howdy

Just a couple of questions:

(1) Are these images from your new metallographic microscope?

These are from the new scope. The 100x objective still isn't working, so I'm limited to 800x.

(2) What is the scale of the images (if you know)?

What do you mean by scale? Are you talking about microns/pixel or something else? The camera is 10 MP.

(3) Are these photos taken as black-and-white?

These are taken in color.

So far, it's a really fun study to do. I'm working on a developing a little jig that will allow me to hold the blade in exactly the same place on the stage so I don't have to do so much fiddling for every picture.

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Re: Ascending Stone Progression at 800x

Posted by AnthonyYan - 19 Aug 2012 17:24

Hi Clay,

By "scale" I just mean a length-scale. For example, what is the length across the width of the image? Or something like a little line in the image with a measure of how long it is (something like 0.01mm, or 10 microns, etc.). Maybe you could take an image of your linear stage micrometer at the same magnification?

I'm kind of curious how big the scratches are.

Sincerely,

--Lagrangian

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Re: Ascending Stone Progression at 800x

Posted by wickededge - 19 Aug 2012 21:17

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No problem, I can do this.

AnthonyYan wrote:

Hi Clay,

By "scale" I just mean a length-scale. For example, what is the length across the width of the image? Or something like a little line in the image with a measure of how long it is (something like 0.01mm, or 10 microns, etc.). Maybe you could take an image of your linear stage micrometer at the same magnification?

I'm kind of curious how big the scratches are.

Sincerely,

--Lagrangian

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Re: Ascending Stone Progression at 800x

Posted by PhilipPasteur - 21 Aug 2012 08:26

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Clay,

Just curious, what is the problem with the 100X objective? I have no experience with the kind of microscope that you have, but have spent lots of time with various lab microscopes. Usually changing an objective is relatively easy...

Phil

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Re: Ascending Stone Progression at 800x

Posted by wickededge - 21 Aug 2012 09:34

I can't tell what's wrong with it except that I can't get it to focus. I've sent it back once and the new or repaired one they sent back is the same. Their tech is looking into it now. Hopefully I'll have an answer today.

PhilipPasteur wrote:

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Just curious, what is the problem with the 100X objective? I have no experience with the kind of microscope that you have, but have spent lots of time with various lab microscopes. Usually changing an objective is relatively easy...

Phil

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