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The Making of the OSF Knife, Nick Wheeler, Part I

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- Gear reviews and tests - Edged tools -



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Description :

This pictorial article outlines Nick Wheeler's blademaking steps for the OSF knife, a full-tang stock-removal bushcrafting knife.

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Nick Wheeler, a Winlock Washington knifemaker, made the OSF knife blade blanks and supplied them to a group of forum members over the last couple of years. This pictorial documents the making of a carbon steel, stock-removal version of the OSF knife from blank rough-out to heat-treat. Part II will cover the steps up to delivery of the blade blank to the customer.

The blanks were delivered ground, heat-treated, and sharpened for final assembly by the final owner or by Jamie Knowlden.

This project knife began as a forum discussion looking for a full-tang, Scandi ground bushcrafter type knife. Nick's efforts produced this series of "OSF" engraved knives.

Early in 2003, Nick Wheeler was contacted by Jamie Knowlden to produce a full-tang scandi ground knife blade blank in the bushcrafter format. Forum members had worked up the blade configuration in a series of discussions and finally settled on the blade shape shown here alongside some O-1 flat barstock.



OSF pattern master, O-1 flat barstock

There were approximately 50 stock-removal OSF knives ordered as blade blanks by several forum members; Nick also created 6 forged full-tang and 3 stick-tang versions using his own designs. This pictorial covers the making of a tapered tang, stock-removal version. All the blanks were delivered to Jamie for either his handle work or for transfer on to the owners for their handle applications. Many were sheathed by Jamie Briggs, making this knife a true collaborative effort.

First we have Nick grinding away at a blade blank in his shop in Winlock Washington. Nick makes both stock-removal knives and forged knives. He has recently passed his performance tests for Journeyman Smith and is on his way to complete the tests for his JS stamp this year.



Nick Wheeler

The pattern was scribed into one of several steel bars using the master template shown in the above image. O-1, ATS-34, S30V, were some of the steels chosen by forum members for their OSF knives, this pictorial outlines the path of a carbon steel blank with all processes taking shape in Nick's shop.



Scribing Pattern

After scribing, the blanks were cut out on a bandsaw.



Bandsawing blank



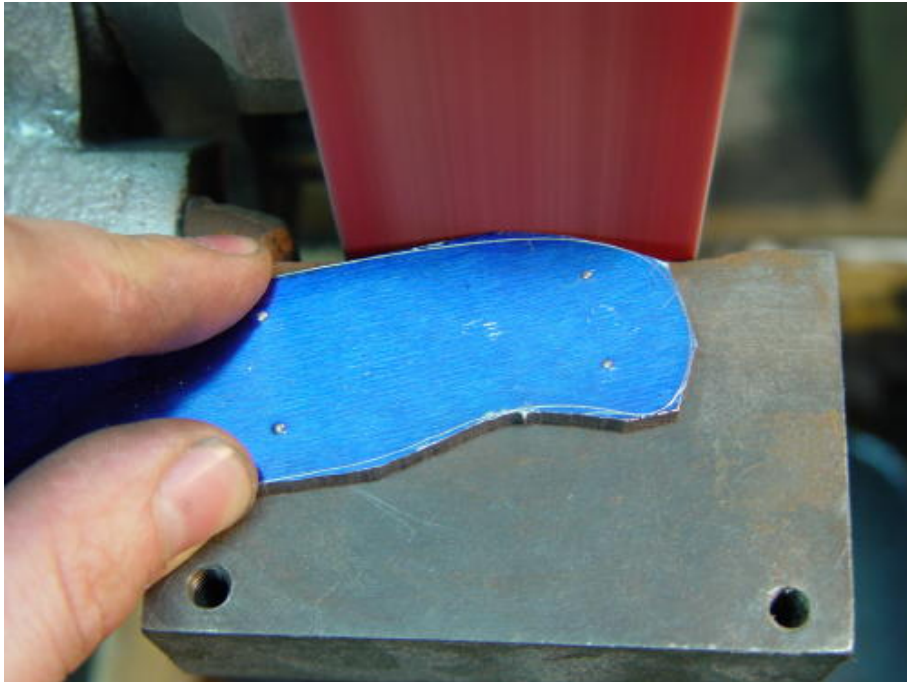
Bandsawing blank, nearly finished

Here are 4 blanks after bandsaw cutting.



Four sawn blanks

The final blade profile was then ground to the scribe line.



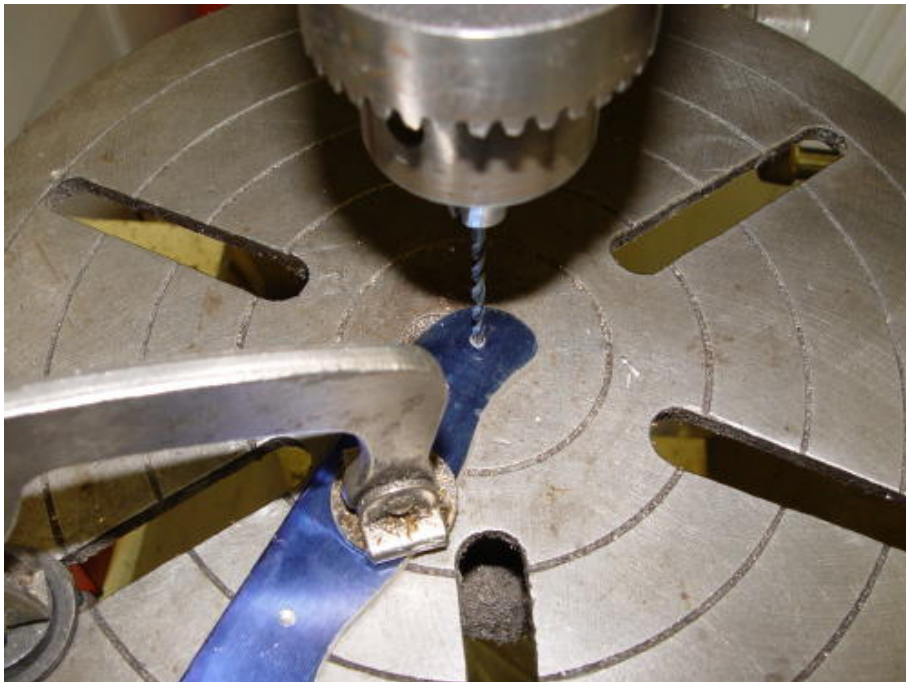
Grinding to scribed line

Here is a comparison of a sawn blank versus one ground to its profile.



Comparison sawn vs ground to profile

Pin or bolt holes were then drilled in the tang. Many of the OSF knives were delivered with tapered tangs so drilling at this stage assures true holes. Nick also allowed a large degree of latitude in pin or bolt patterns and with or without lanyard holes.



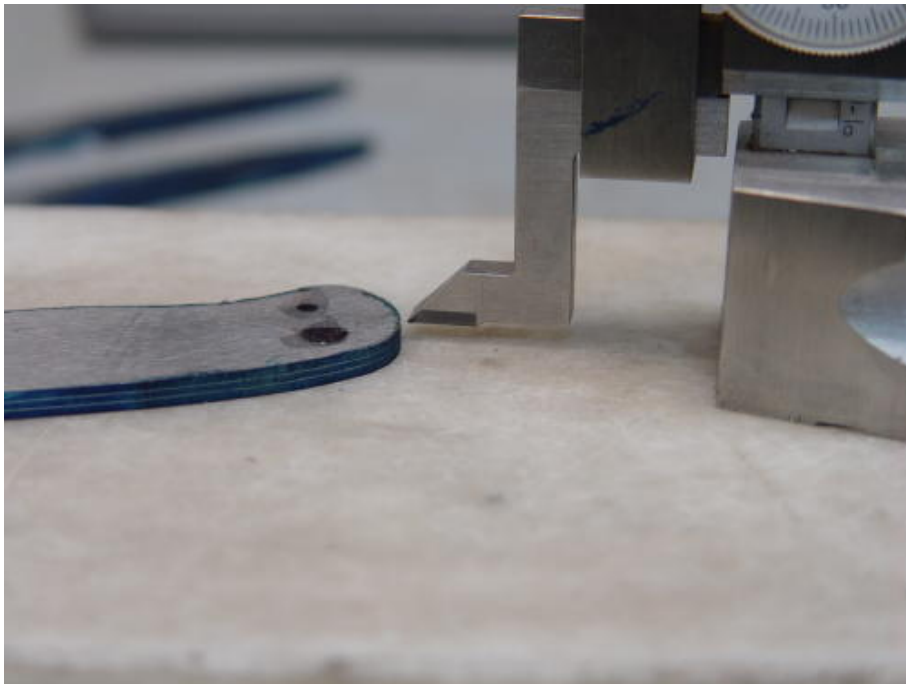
Drilling for handle attachment

Blade centerline was established for edge grinds,



Centerline scribed for edge

and the tang was likewise scribed if it was destined to be tapered.



Tang scribed for taper

The tang was then ground to the desired taper,



Tang taper ground

and hollowed to both reduce weight and increase the epoxy thickness during handle assembly.



Tangs hollowed

The blade edge was then ground. Nick works this in stages, this is the beginning,



Start Grind

and after that first pass.



First Pass, edge grind

Then after the final passes, just before heat treat.



Final Pass

This is a completed blank ready for heat treat.



Blank ready for heat treat

And more blanks also ready for heat treat.



More blanks ready for heat treat

First the blades are normalized in a salt bath.



Salt Bath

This is the mouth of the bath.



Mouth of Salt Bath

This blade is just being removed from the salt bath, and is ready for



Blade coming out of salt

austenitization.



Austenitization

The blade is then quenched and tempered in a digitally controlled oven.

Final stages include final grinding and sharpening prior to delivery of the blank to the customer.

Nick offered the OSF pattern blanks in several configurations. Along with carbon and stainless steels in at least two thicknesses, some blanks had tapered tangs (as the example in the above pictorial) or flat tangs, grind heights also varied from 1/2 to 2/3 of the blade width, and they were also available differentially hardened with custom pin or bolt patterns.

The final image shows an OSF blank alongside some of Nick's other work.



OSF blank and other patterns

Please refer to [Part II](#) which covers the final steps after heat-treat. These images follow the the blade through surface grinding cleanup to final sharpening.

See also [Part III](#) which covers the making of a forged version of the OSF knife.

Resources

Additional information and examples of Nick Wheeler's knives can be found in the [Alpha Knife Supply Kit Knife](#) article.

[Nick Wheeler's Site](#)

Post-scriptum :

Version 1.0 2/14/2005

Version 1.5 3/17/2005 Linked to Part II

Version 1.6 3/21/2005 Linked to Part III