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The Making of the Forged OSF Knife, Nick Wheeler, Part III

Schwert

- Gear reviews and tests - Edged tools -

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Description :

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

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. Part III of this pictorial documents the making of a carbon steel, forged version of the OSF knife from a round billet to final heat treat.

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.

Only 6 forged versions were made in the project, this one, the seventh, is a special version done in W2.

Please refer to Part I and Part II of this article which covered the blade-making steps for the stock-removal versions of the OSF knife.

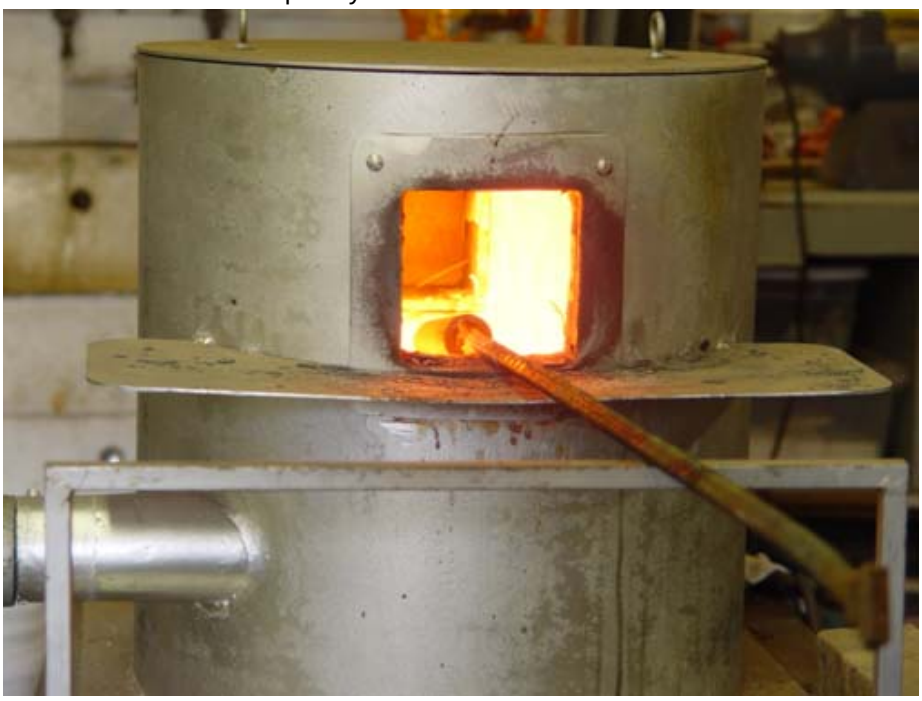
This part will cover the aspects for the forged OSF. The reader is referred to the last half of Part II for final blade preparation including grinding and sharpening.

Nick made 6 forged OSF knives in the standard run, most in O-1 steel. This final forged blade follows the pattern but was made in W2 and will be fully flat ground instead of scandi ground and clay hardened. However the steps presented below represent Nick's practices for those original 6 OSF's.

Here is the round billet of steel next to the OSF drawing laid out on aluminum. This pattern shows the edge drop that was part of the pattern for the forged blades. In the stock-removal pattern the edge was nearly in line with the bottom of the tang, here it was dropped as part of the forging process.

W2 billet and OSF pattern

The billet is welded to a rod and forging begins. This 1.5" round X 7" long billet of W2 is enough steel for about 9-10 blades this size by the time it has been completely drawn out.



Billet in forge

First the round billet is flattened in a press.

This press uses a 6" hydraulic ram, 5 hp motor, and an 11 gpm pump to deliver around 16-20 tons average working pressure.

The travel speed is slow, about 1" per second or so. You flip the switch on, push the lever down (hold it down) and the top die comes down slow and just keeps squishing whatever is under it until the material loses heat, or the press has no more squishing power. It doesn't rise back up until you lift the lever, and then it goes back up the same speed it came down.

Billet in Press

Drawn out.

Drawn down after first heat

Nick holding the drawout.

Nick Wheeler with drawout

Second heat to forge

Second heat drawout

down to width.

Down to width for the OSF

The OSF tip is forged to shape,

Forging OSF tip

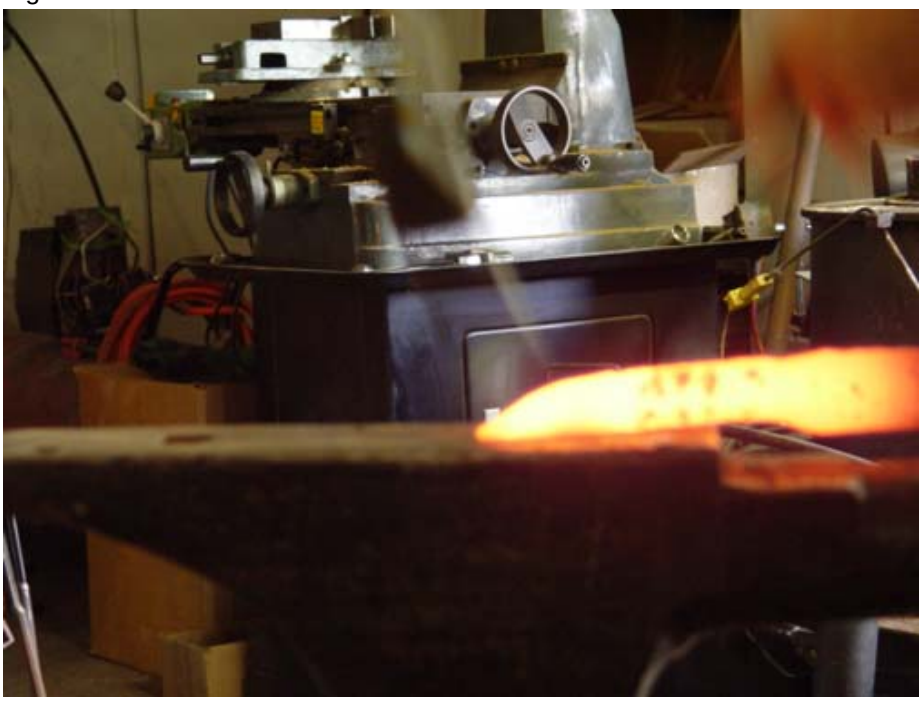
and on the horn.

Forging tip on the anvil horn

And a tip closeup.

Tip closeup

This billet is then straightened.



Straighten the billet

And the blade starts to take shape during blade perform.

At preform and the start of the bevels being forged in, the blade is actually backwards to what you probably think. At "preform" the cutting edge is straight and the spine is rounded.

Blade starting to take shape

Now the bevels are starting to be forged in.

Beginning to forge the edge bevel

And it is getting close to shape.

Notice that in this image the blade has been flopped 180 degrees from the previous image. The spine will kick up and round out that straight edge to form the belly of the cutting edge.

Close to shape

The blank is hot cut off the billet.

Hot cutting OSF off of billet

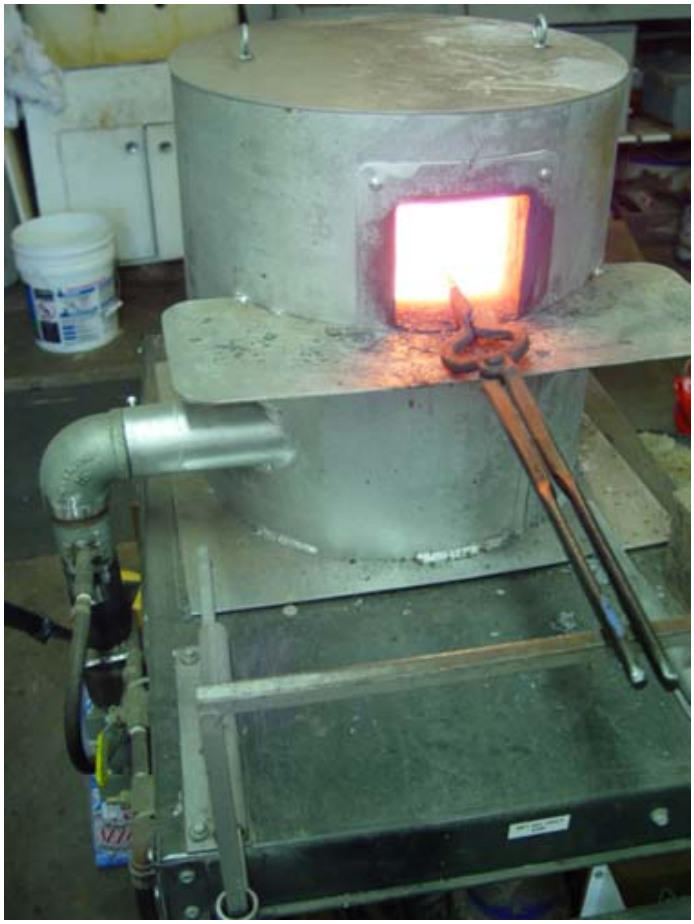
Ready for tang draw and shaping.

Ready for tang draw

Drawing the tang.

Drawing tang

Back in the forge.



Back to the forge

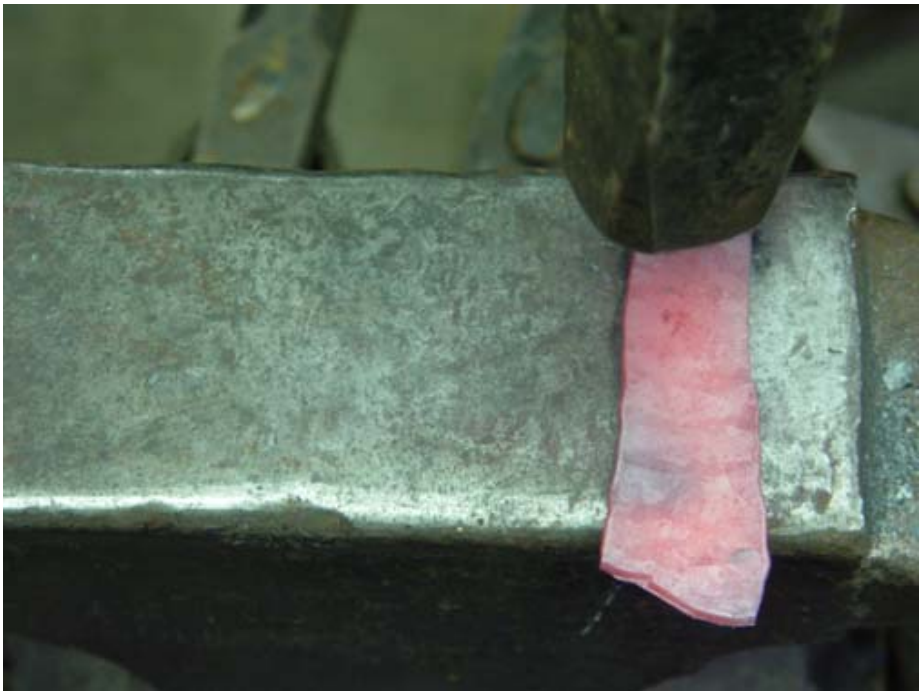
Tang coming along.

Tang coming along

And still drawing tang.

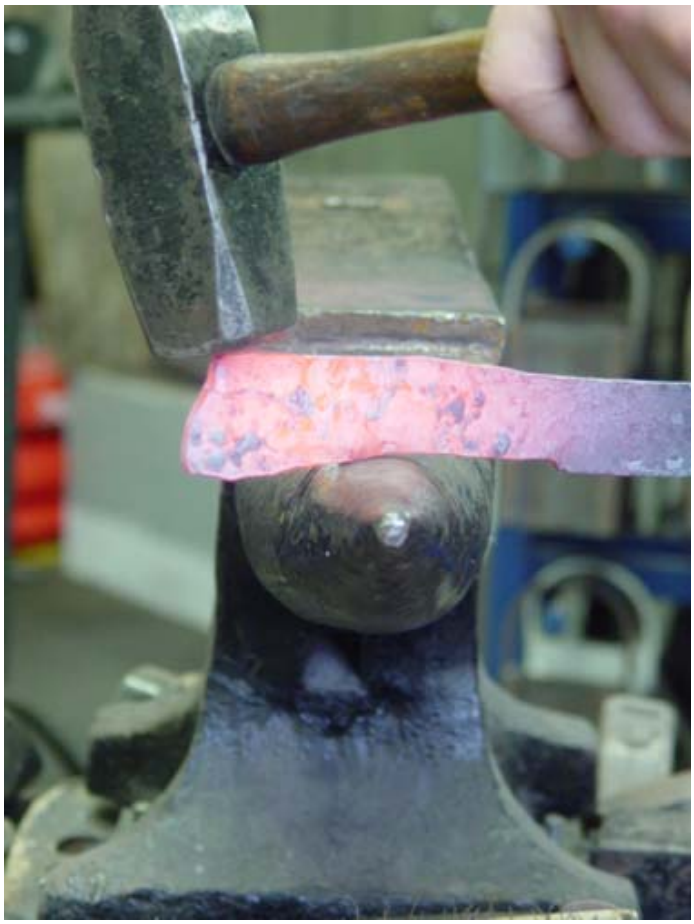
Still drawing tang

Tang up close.



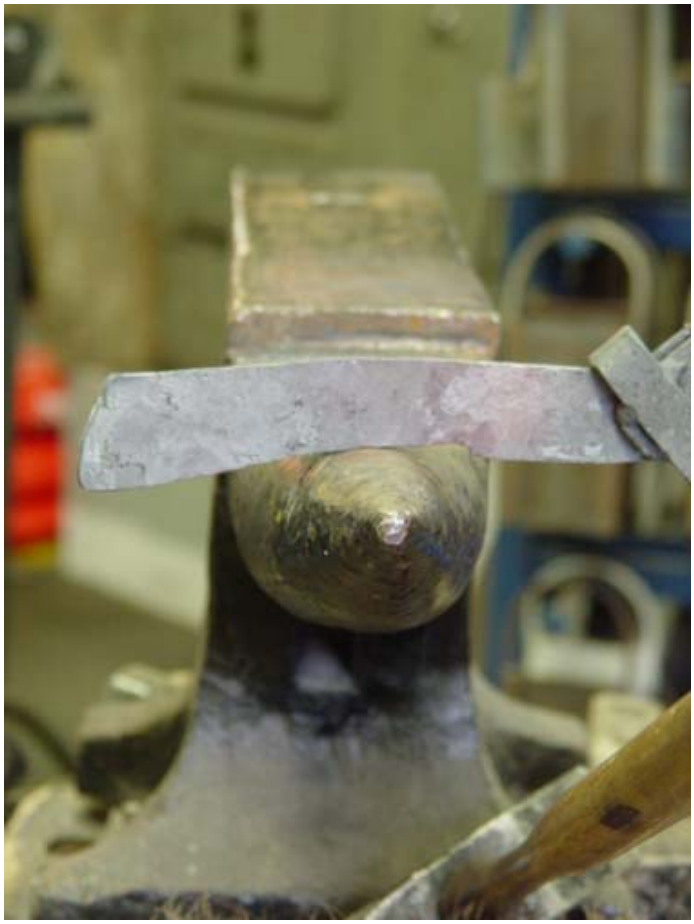
Tang draw, closeup

Shaping tang on horn.



Shaping tang on horn

Tang close to profile.



Tang close to profile

Almost done.

Almost done

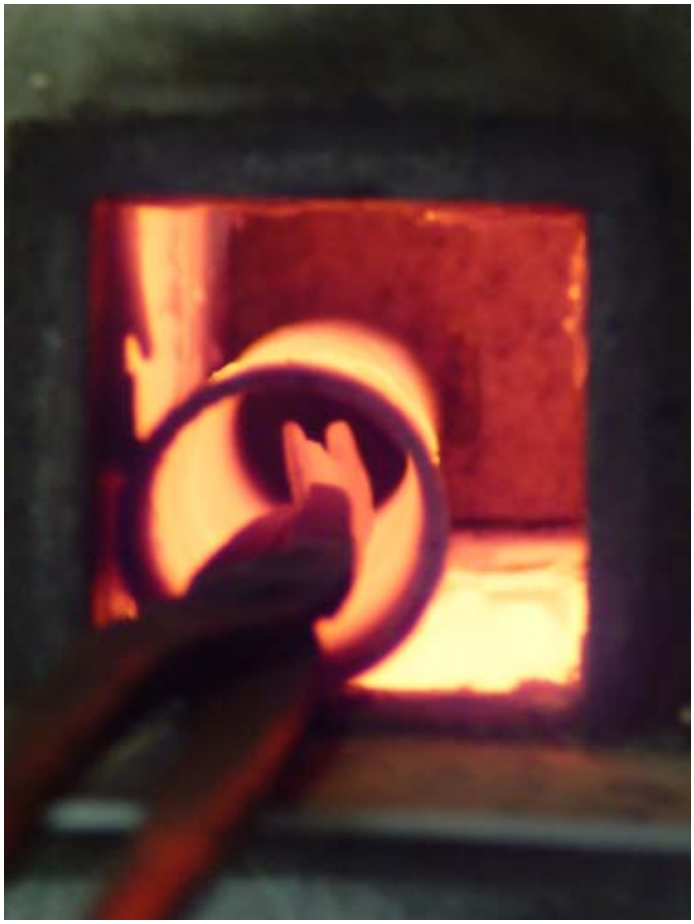
Finishing heat.

Finishing heat

OSF against the pattern.

OSF against pattern

Normalizing in forge

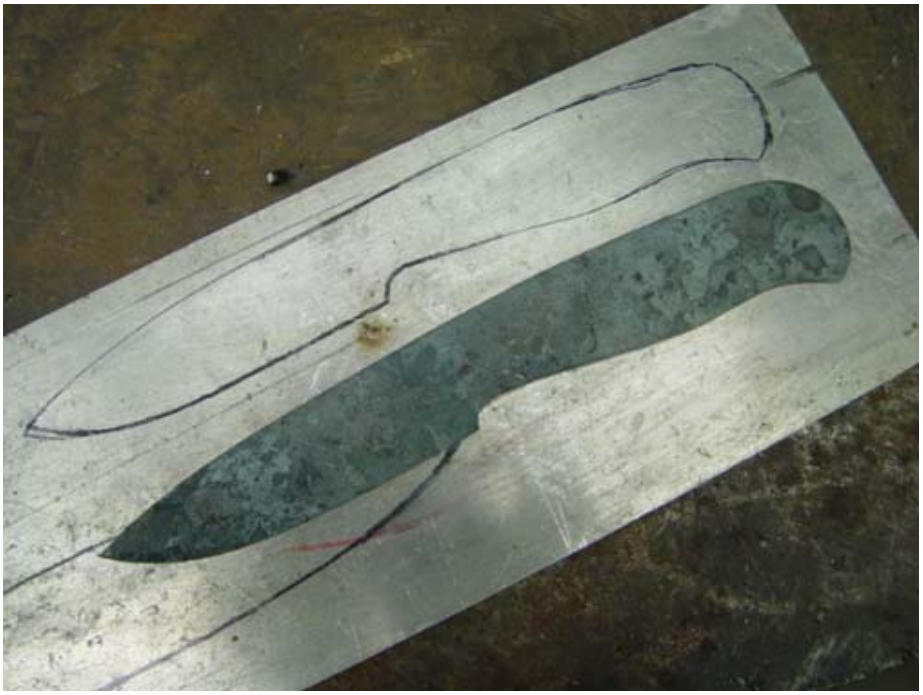


Normalizing in forge

At normalizing heat from forge.

OSF at normalizing heat

Profile ground.



Profile ground

Drilled then tapered tang being flattened.

Flatten tang

Surface ground flats, (Note this images is another knife that is going to be Scandi ground, not flat ground.)

Surface ground Note, this is a Scandi ground example not the W2 flat ground knife in most of the pictorial

Drilled, ground and ready for salt bath. (Back to W2, flat ground knife).

Forged knife, ground and ready for salt bath

Final steps again will closely follow the stock-removal pictorial found in Part II. This blade will be clay-hardened, oil-quenched and tempered then, set up for final cleanup grinding and sharpening.

This is the forged OSF made for Schwert about one year ago. In the spirit of the OSF knife project this one passed through 3 skilled hands prior to arrival. Nick Wheeler knifesmith; Jamie Knowlden scalesmith; and Jamie Briggs leathersmith. I thank them all, with special thanks to Nick for allowing me the privilege to put this pictorial together.

Schwert's Forged OSF, arrival day Image by Schwert. O-1 2/3rds Scandi ground by Nick Wheeler, Redwood burl scales by Jamie Knowlden, sheath by Jamie Briggs

Please refer to Part I which covers the initial steps up to heat-treat for the stock-removal OSF's.

And Part II of this series which covered the final steps following heat treat. This is applicable to both the stock-removal and forged knives, but is illustrated with the stock-removal knives.

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 3/17/2005