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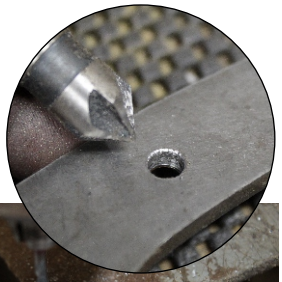
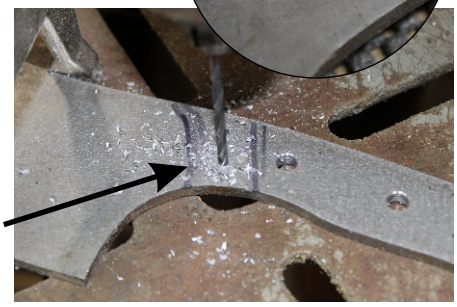
How to Make a Knife

from one of our quality 1095 High Carbon Steel Blanks

Reaming Pin Holes

Blanks come with location holes pre drilled. You will need to ream the pin holes with a 1/4" drill. If possible chamfer each hole to make inserting the pins easier. If you want to add brass bolsters drill two additional 1/8" bolster pin holes prior to heat treating. Be sure to always clamp the blank to drill press table.





Two 1/8" optional bolster pin holes.

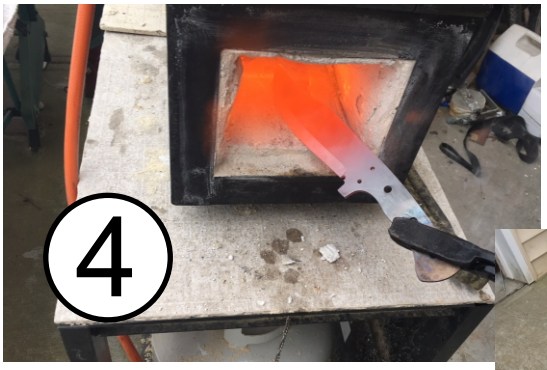
Above Dan Berg is using a 2x72 belt grinder and our Tilt Table work rest which can be set at correct bevel angle. The Tilt Table makes bevel grinding easy. If you do not have a belt sander bevels can also be done with a disc grinder or even files.

Grinding Rough Bevels

Mark the blades edge with dykem blue or a marker and scribe two center lines, which are called railroad tracks. These will be your visual guide when grinding bevels on both sides of the blade. Rough bevels should be left a little thick on the scribe lines and will be finished after heat treating.

Surface Grinding

Clean up the surface of the blade. This can be done by holding it with a magnet and using the flat platen of a belt grinder or by hand sanding with a block.



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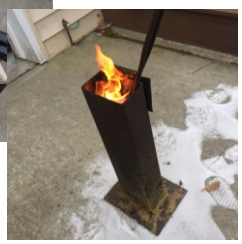
Heat Treating

1095 High Carbon Steel can be heat treated by heating the blade until its just past cherry red and non magnetic. Once you confirm the blade is non Magnetic by touching it to a magnet then quickly quench in oil.



Quenching container should be made from steel and have a cover.

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Tempering

After heat treating the blades need to be tempered. Heat treating makes the steel very hard but also brittle. Tempering gives the blade its strength. The Tempering process is easy put the blade into an oven @ 375-400 degrees for two hours and then let it cool slowly without opening the oven door. Its recommended to temper twice.

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Post Heat treat finish Grinding

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After Heat treating and Tempering finish the bevels and repeat surface grinding to remove the dark carbonization called slag. Using finer grit belts can be used to achieve desired finish.

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Handles

Handles can be attached with two part epoxy and 1/4 “ brass pins. If bolsters are being used they should be attached first. We use a multi step procedure called the Northgard Technique with ensures proper alignment.

Finish shaping the front of both handles. This area can not be finished after mounting scales to the blade. Then glue and clamp one side to the blade. Any excess glue can be cleaned off the blade with an alcohol wipe. After drying clamp the assembly to drill press table and drill pin holes using the pre drilled holes through the blank as a guide. Now trim excess material from first side of the handle. Now repeat with the second side. Glue and clamp it in place being sure to align it exactly in position. Once dry clamp it to the drill press and using existing holes drill through complete assembly. Once dry handles can be shaped sanded and blade sharpened.

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