



Bokken by archworks

Build Manual

Thank you for buying the build manual for Bokken!

Intro:

Bokken is Japanese, meaning bok(u) – “wood”, and ken – “sword”. It was used in sword-training by samurai in feudal Japan, and is still used today in several martial arts. It is typically made of hardwood.

This sword is made of smoked oak. The smoking is done by exposing the oak to ammonia fumes, which alters the wood and creates a beautiful dark color. This process only works with oak, and the intensity of the color depends on how long the wood is exposed to the fumes.

The sword is finished with raw linseed oil, which protects the wood and gives it a warm smooth touch.

List of Materials Used:

Wood:

For my build I used European oak, but other types of hardwood can be used as well - beech for instance.

Note that, if you want to “smoke” it, only oak will work, as the color change is a chemical reaction with the tannic acid in oak.

1 pc oak 2,5” x 1” x 40” (1” is the finished thickness of the sword.)

For Smoking:

Ammonia water 25%

1 pc large plastic bag/container

3 pcs stainless nails or screws mounted in scrap wood. This is to mount the sword on, thereby letting the ammonia fumes flow around the sword.

Router Bits:

Chamfer bit - 45°

Round over bit - Radius 12,7mm (1/2 inch)

General Build Guide

-mark up the sword. Start by drawing the back of the sword - see drawing 01 - you can use a long flexible metal ruler to create a nice even curve.

-cut out the sword as precise as possible using a bandsaw or similar tool.

-even out the cut sides with a belt sander.

-route the backside of the blade using the 45° chamfer bit, and the round-over bit for the blade and the handle - see drawing 02.

-hand-sand the sword with 120 grit and finish with 240 grit.

Smoking:

There are many guides on YouTube showing how to do this, but in short: it is the fumes of the ammonia that create the reaction in the oak. The ammonia is not supposed to touch or be applied to the oak.

-mount the 3 stainless nails/screws in 3 pieces of scrapwood, thereby making 3 points on which the sword can rest, letting the ammonia fumes flow around the wood.

-pour some ammonia in a bowl.

-put it all in the plastic bag. Tape it shut so it is as airtight as possible.

-wait 20 minutes. The longer the oak is exposed to the fumes, the darker it will get, so check regularly.

Apply your finish of choice.

Done!

Have fun building!

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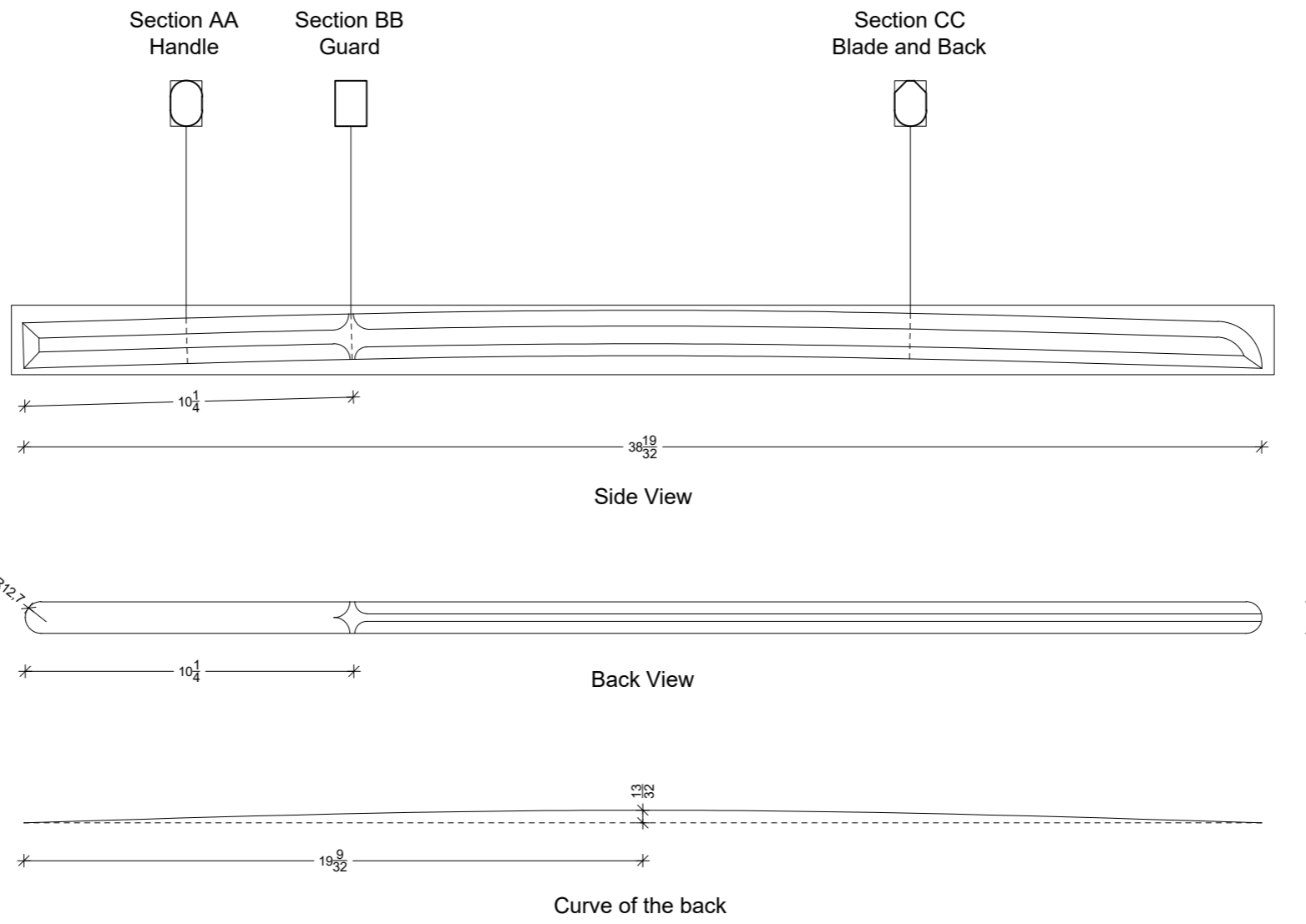
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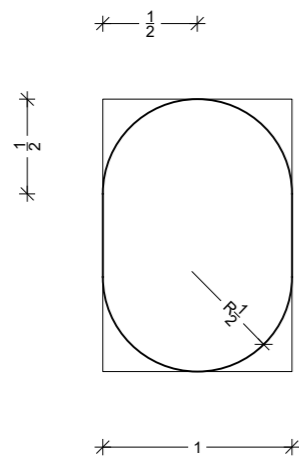
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Thank you.

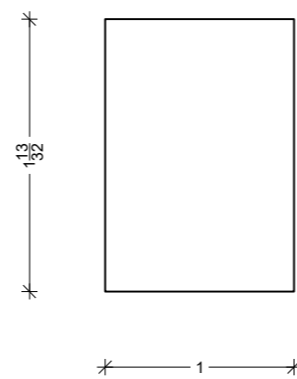


Section AA
Handle

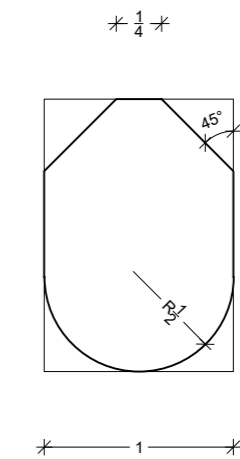


Router bit:
Round over with radius =
12,7mm // 1/2 inch

Section BB
Guard



Section CC
Blade and
Back



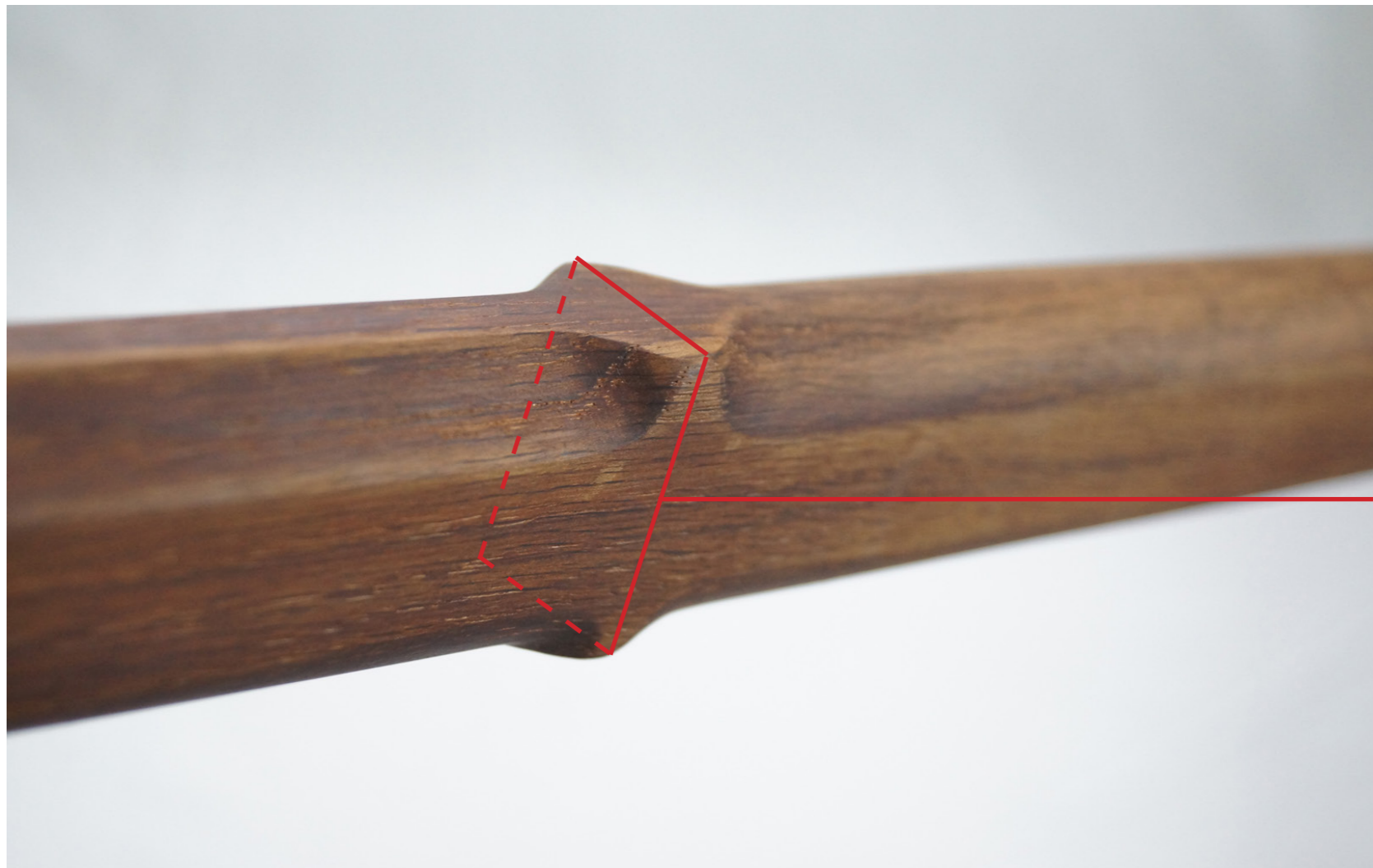
Router bit:
45 degree chamfer
Round over with radius =
12,7mm // 1/2 inch





Back of blade.

Handle.



Section BB - Guard.
The transition from the routing of the handle and backside to the guard. The guard is a rectangle measuring 1" x 1 27/64".



Bottom of handle is rounded with 1/2" router bit.



Guard.

Handle.

