

Sword Polishing Techniques Unique to Japan

When swords are displayed in museums outside of Japan, they are probably hung on the wall crossed. When swords are displayed in Japan, they are in cases with special lighting so that the viewer can see the hamon (differentially hardened edge) and the jigane (the folded outer steel of the blade). This is where swords of Japan differ from the rest of the world. They are not just sharpened and burnished; they undergo a specialized polishing process called *kenma*.

What is kenma?

The explanation of the forging process was quite long. However, the main points of the polishing process can be explained in one article.

Other Japanese tools such as chisels, planes and kitchen knives are only sharpened on the cutting edge. However, in contrast with other countries, not only the cutting edge of the Japanese sword is ground. The whole blade apart from the handle is polished. This is not to simply decorate the blade by making it shiny. All polishers try to create a 'clear polish'. It must be like clear water when the gravel at the bottom is clearly visible. This pure and clear polish is the essence of *kenma*. This is because the sword was the weapon of the samurai, whilst at the same time associated with the gods of Japan. As it is an object of the gods, so it must therefore be also a thing of beauty.

When the samurai emerged at the start of the 12th century in the Kamakura period, polishing techniques and polishers had already appeared. When the Japanese sword as we know it was evolving, it became the 'soul of the samurai'. Unless you are aware of this concept, you will not be able to understand the importance of the sword in the mind of the Kamakura samurai going to fight in the Great East Asian Wars. The continuity of the sword right through Japanese history expresses this.

I would now like to explain the polishing process stage by stage. Polishing is broken into two main stages: shitaji-togi (foundation polishing) and shiage-togi (finish polishing). First I would like to explain the various tools and types of polishing stones essential to the process. Maintaining the correct mental attitude whilst polishing is very important. If this deteriorates then it is not *kenma*. Similar to martial arts, posture is very important. Without using power, one must use the whole body to polish. The polisher supports his weight on his knees and moves the blade from side to side. This also restricts him from moving back and forth, which would ruin the polishing stroke. There are no measuring tools used. The job of carefully forming the niku (the cross sectional optimal form for efficient cutting: the meat of the blade) is a long and arduous one. Only a small amount of pressure is put into the push stroke, and none in the pull stroke.

Shitaji-togi is the process for perfecting the basic shape of the blade. The tools are very simple to look at. However, polishing requires a vast amount of knowledge that has been accrued by generations of polishers. For instance, the stool used is called a *shōgi*. Is not for actually sitting on. This is because there is a tool used called a *fumaegi*. The

correct posture is to put your right thigh onto the stool, whilst the rest of your body hangs in the air. There are tales of some apprentices putting an egg under their bottom, to ensure that they do not put their weight onto the stool. It is said that the polisher resembles a bird perched on a branch. By using this posture the polisher is in complete control and if he notices something is not quite right, he can stop immediately. Martial artists will understand this as *zanshin*. Also, the way in which the tools are arranged is unique. They are positioned so that the polisher can work smoothly and continuously for extended periods comfortably.

The polisher uses 6 various grades of polishing stone from very coarse to very fine: iyo-do, binsui-do, kaisei-do, nagura-do, koma-nagura-do and uchi-gumori-do. Every stone has a slightly different purpose. At the same time as forming the shape, the activities in the steel also begin to appear.

Uchi-gumori is the last stone used in foundation polishing. There are two types of this stone: uchi-gumori hato, and uchi-gumori jito. Up to now the blade has been pushed across the stone, in these stages it is now pulled. Lastly, the foundation work of the kissaki (point-section) is completed using uchi-gumori hato.

Next, is shiage-togi: finish polishing. During these stages, the beauty of the jigane and the characteristics of the hamon are brought out. The processes in this section are: hazuya, jizuya, nugui, hadori and migaki. In these stages, not only the stones are different, but also the way in which they are used. This is only a basic guide to the process, as each of the various schools uses slightly different methods of polishing. These special techniques have been passed down from long ago orally from teacher to student secret to each school. This process is so detailed that it cannot be fully explained by writing alone.

Lastly, I must mention this essential fact. For those of you who think that polishers are just supplementary to the swordsmith, the forging and polishing of a sword are an inextricable, and require each other in order to produce a Japanese sword. It becomes a pure vessel of the gods. Therefore, polishing is also a spiritual pursuit. Around the swordsmith's workshop, according to Shinto beliefs, there is a straw rope with white paper tassels and a shrine mounted on the wall. This is a sacred boundary prohibiting the entry of evil spirits into the sanctified workshop. The polisher's workshop is no different—it also has the sacred rope and shrine protecting the workshop.

This spirituality is exemplified with the use of water to purify the surface of the polishing stone. It could have been a sad state of affairs had this aspect been lost after the war.

This concludes the explanation of forging and polishing. However, before a samurai can wear his sword at his hip, it has to be passed to several other craftsmen before it is completed. These include: saya-shi (scabbard maker), nuri-shi (lacquerer), tsuka-maki (handle-wrapper), and the craftsmen who make the metal fittings. I will give a general explanation of these another time.