

日本刀の製作工程

① 刀の原料 (玉鋼)
① The sword's raw Material *tamahagane*

② 薄く平に打ちのばす
② First, it's crushed into a thin plate

③ 小割りにする
③ Broken into smaller pieces

④ 選別する
④ Sorted

硬くてキレイ Harder pieces

軟らかい Softer pieces

⑤ 同質の鉄であらかじめ作っておいた台の上にそれぞれ積み重ねる
⑤ Pieces of the same quality steel are stacked onto a plate.

しんがね 心鉄用 軟らかいものばかり *shingane* (softer steel)

かわがね 皮鉄用 硬いものばかり *kawagane* (harder steel)

刀身の断面図
Cross section of the blade

⑥ およそ1300℃ぐらいまで炭を使い熱し^{たんせつ}鍛接をする (※たたいてくっつける)
⑥ The plate is heated to about 1300℃. The pieces are then hammered and welded together. (heated in a charcoal fire)

⑦ 切目を入れ折り返す (ヨコ) (horizontal) (タテ) (vertical)
⑦ Incisions for folding

折り返す folded in half

1枚にのぼす Hammered out

これを繰り返す The folding cycle

1枚にのぼす Hammered out

折り返す folded in half

⑧ それぞれ10数回程度繰り返し、皮鉄・心鉄を形成する
⑧ Each piece of steel is folded approx. ten times.

心鉄完成 completed *shingane*

皮鉄完成 completed *kawagane*

皮鉄の形に合わせて打ち整える Prepared for joining with the *kawagane*

打ち曲げる Hammered into shape

U字を使って曲げていく Shaped, using a "U" shaped tool

⑩ 2つを組み合わせ鍛接する
⑩ The two pieces are joined and welded together.

⑪ 刀の形に延ばしていく 1300℃→800℃
⑪ The blade is hammered out. 1300℃→800℃

The Japanese Swords Production Process

⑫ この段階で、日本刀としての姿がはっきりわかってくる。小槌を用いて打ち出していく
⑫ At this stage the steel is hammered into the intended shape of the blade.

素延べ上り *Sunobe-swordblank*

ひづり 火造り上り (刃側を打ち出す) 700℃
The blade is heated and the cutting edge is hammered out. 700℃

一切先の打ち出し - Forming the *kissaki* (point section) -

矢印の方向に、加熱して小槌でたたいて、切先を打ち出す
It is heated, and using a small hammer the *kissaki* is formed in the direction of the arrow.

まず、ななめに切りおとす
First, a diagonal cut is made.

⑬ 刀身を赤らめる 800℃~900℃
⑬ The blade is heated red-hot 800℃~900℃

⑭ 刀紋を入れるため^{やきぼつち}焼刃土を塗る (※ねん土・炭・砥石を混ぜたもの)
⑭ Clay is applied for *yaki-ire* (quenching) (a mix of clay, charcoal and powdered whetstone)

⑮ 火造りしたものをヤスリやセンという道具を使い、小さな凹凸を平面になるよう削り整え、さらに粗い砥石で綿密に仕上げる
⑮ Now that the blade has been shaped, a file and tool called a *sen* are used for smoothing the blade. For finer smoothing, a rough whetstone is used.

⑯ ひづみをとり全体を整える
⑯ Any distortions in the blade are corrected

⑰ 研ぎ師をはじめとする、職人へ回す
⑰ The sword is now passed to a professional sword polisher

⑱ 最後に銘を入れる
⑱ Lastly, the blade is signed

⑲ 完成!
⑲ The finished blade

監修：全日本刀匠会
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