Ancient blacksmith
Master Yukinori Shirataka
Inscription Okimitsu the 2nd

People are known not to mention him as the blacksmith's which
is the nearest to living national treasure.
People study his greatness with the textbook of the Japanese fifth grader.
He is the best great blacksmith in Japan. Without him, it won't manage the Japanese cultural assets.

iyogata chef knives

Materials

The iron was Recycled ,collected in Tohdai-ji temple. Iron is made in UK Armstrong co.,Ltd in 1905!!
It's belong to wrought pure iron.
The carbon content is materials equa to or less than 0.02%.
Tohdai-ji Temple is a wooden building of the world maximum.

Thinner stick is the steels.
Blue steel #2 is suitable for Double bevels.
Swedish 30+ years old Swedish Woodeholm is suitable for single bevels.

Steels insertion chisels

Heating in a heavy oil furnace

It is a belt hammer to show toward.

around 1,200 degrees and begin forging.
The color is tinged with yellow

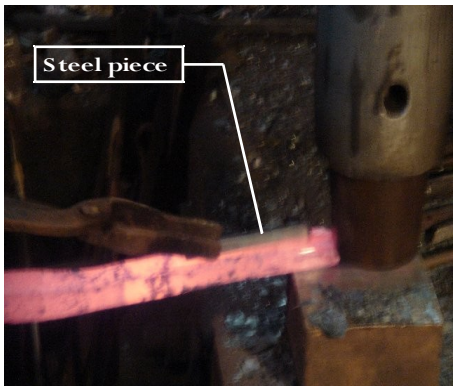
Smiting

Smiting around 1,200degrees and removing the rust of surface.
Making rectangle section.

chopping soft iron with a chisel.

making the ditch of the Y section to put steel with chisel and belt hammer.
It's so dangerous works!

Insertion steel /Hon Warikomi /



Setting the steel piece on the ditch.

Pasting boric acid for hammer weld

Boric acid (H_3BO_3) helps hammer welding well.

Making core /Nakago tori/

Stretching from center portion to make 2pcs length.

Cutting /Kiriotoshi/

Cutting in center to divide as 2pcs.

Materials of 2pcs after Kiriotoshi

Heating again to stretch the another side.

Smiting for 2pcs /Hidukuri/

Cutting via 1pcs!!

Hidukuri (cut as a 1pcs)

Stretch a blade approximately / Hosakinobe/

※ After Hosakinobe ,it's Annealing process.
Putting the ash of straw till it gets enough cold.
To remove stress of smiting and rough crystal.
Starting temperature is around 750℃.
When we can touch it ,the annealing completed!
Unfortunately ,most of JP chef knives are omitted this process. However ,it is the most important heat treatment technology. Because we are invisible.
And the most of JP multiple layers double bevel blades are weld by roller in mass production automatic Materials factory. They making flat broad uniform plates and the articles are good appearance.
But they aren't authentic Warikomi or Honyaki blades.

Yanagiga blades

Re-heating

After heating ,smiting with watered hammer.
Removing the garbage with phreatic explosion.

stretching blades

We can confirm hammer pattern clearly!!!
The daring hammer trace is a world glimpse
of the motion.
It is the exact work sign that the abrasion revision
doesn't work for.

The Tohdai-ji Buddaha old materials are old hardware used by the repair of Todai-ji Temple performed during 1905 from 1899. Nishioka temple carpenters leader proofed ,the Iron was manufactured iron as for in Armstrong Corporation (the U.K.)
The cannon which Satsuma used at the time of Meiji Restoration is so.

Now ,there's complex multiple layers materials called Fukugouzai ,squeezed in through with mass product.
It 's made at 1,100 degrees for around two hours, and refine it.
But ,sharpness cannot rise up to the authentic traditional method.

The forge welding dissolves an oxidation film at around 1,100 degrees
and promotes iron and the joining of the steel.

Single bevel blades (Deba houchou)

Steel(Swedish steel)

Steel & special powder

Hammer weld /Haganetsuke/

Putting the steel on the iron

Hammer welding

Hammer welding iron and steel with belt hammer.

Cutting /Kiriotoshi/

Stretching and cutting for 1pcs

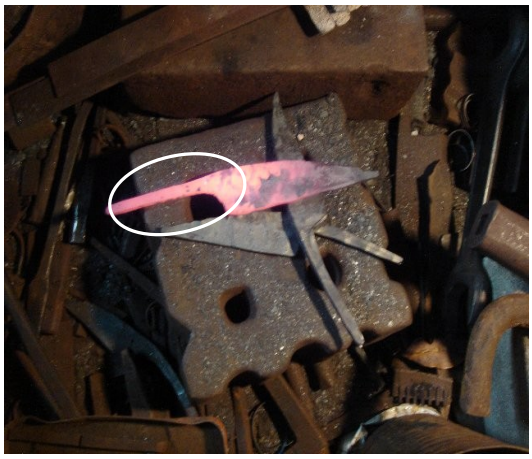
1Pcs

Core have not made yet

Making core /Nakago tori/

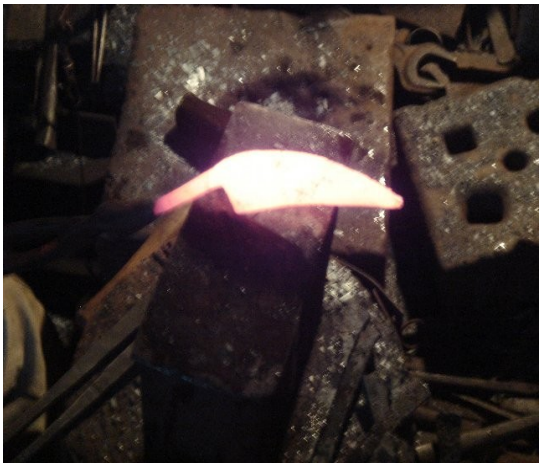
Next, smiting core (Nakago)

A piece of blade



Stretching the core

Smiting a shrimp /Ebigata /



Next ,smiting a back like the form of the shrimp to be next.
This is very important in a next process

Finished shrimp /Ebigata/

The part which is round of the back spreads at a stage postponing the part of the blade thinly and becomes straight.

Stretching blade /Hosakinobe/

A back of the shrimp type consists straight of the chin at this stage extending.

Stretching blades /Hosakinobe/

stretched by belt hammer

Annealing

After Hosakinobe ,it's Annealing process.
Putting the ash of straw till it gets cold.
Removing stress of smiting and rough crystal.

Cutting / Katakiri/

Iyogata houchou

Nakiri houchou

Ajisaki houchou

Deba houchou

Smoothing (cold smiting) /Narashiuchi/

With a belt hammer of 30kg, revising the surface irregularities
After then ,engraving the signature.

Signature engraving

Heat treatment

Putting the cray /Yakitsuchitsuke/

Made from the powder of the Izumi sandstone.

Dried cray

Water quenching(Iyogata・Nakiri etc)

The charcoal to use is pine charcoal.
The burnt color seems sliced red salmon.

Water quenching completed!!

Dropping the cray with wire wheel machine.

Grinding works

Steels making different sparks.

Endless grinder (revising a chin mainly)

Filing

Grinding it not to have a pain in a finger.

*Iron and steel spark are different from each other.
Master find steel or iron place.

*Master was taught the file technique from
Okimitsu the 1st.
Filing a back ,core ,chin and so on.
It's toughed by finger directly.
The file uses an old file together with a new file
and files it.

Removing distortion / Hizumitori/

Removing distortion of Deba.
Tempering ; 30minute at 155 degrees centigrade
Then ,hitting with mullet on the zelkova stamp.

Steel is broken when not cautious.

Tempering

To earn the enough tenacity.
Even if Japanese blades so hard ,and some tenacity seems little.
This is Japanese blades feature.
Use the blades at carefully

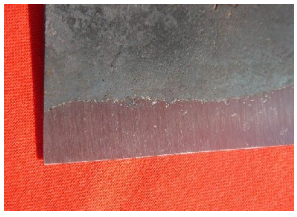
Sharpening

After quenching and distortion completion, polishing bevels.

With an exclusive jig, polishing with the GC grinder.

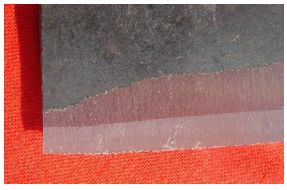
※　Setting a bevel portion.

2-A



※　Seeking steel portion.

2-B



※　Making clam section bevel.

2-C

※GC grinder is artifact stones. It's 120＃～240＃ grit.

Sharpening with Ohmura water grinder.

Ohmurato is natural sandstone
Which was collected in Wakayama JP.
Approx. 240＃ grit.

Blade crest shading off with the wire wheel.

Making easy mist and haze pattern.
Sharpen with the water which is
mixed powder of the limestone.

Finishing by hand works.

Clam bevel finish with dome section Iyoto.

Push ; stomach sharpen
Pull ; edge sharpen
Removing steel rolls ,made by grinder!!

※ Iyoto is the whetstone from old days produced in local Tobe

※ Tsushima Nagura is black stones produced into the sea in Nagasaki.

※ The steel prtion slips, and the iron is heavy in hand works.

Iyoto refer to details link.

1） The last miner Nakaoka collects Iyo to contain the Japanese ancient culture.
2） There is much grit range at the same stone.
3） Power of Iyo

The last finish

Painting clear

Burning core to fit handle

Setting handle

Confirming center

Wiping with oil

Boxing!

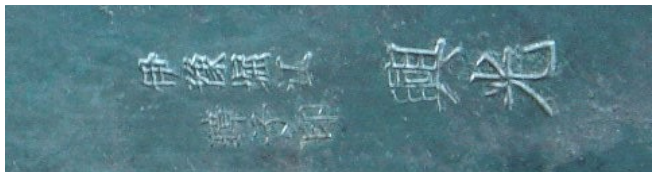
Nakiri Kanotoh 150mm

Yanagi (above left hand 270mm)

Iyo Horie Okimitsu

Shouji mark

The articles is made from Tohdai-ji temple iron.



Shouji mark Shirataka Yukinori Tan

When sir Shouji died, Okimitsu 2nd made it.

Iyo Horie Okimitsu

When reach the Okimitsu 2nd ,master made the mark, was similar to the 1st in Tokyo.

Daibutsuden Kozai Shouji mark

The articles is made from Tohdai-ji temple iron.

Articles and signatures

Iyogata 180,150 and Ajisaki 105mm from top.

Deba

Iyo Horie Okimitsu

Okimitsu the 1st mark

Iyo Horie Okimitsu

Recently stamp

Daibutsu-den recycled iron in Tohdai-ji temple

In 1974, by the roof repair of Todai-ji Temple.
3Tons iron was collected.
The Iron is made in UK Armstrong co.,Ltd in 1905!!
The late Tsunekazu Nishioka temple carpenters leader proofed it.
It's belong to wrought pure iron.
The carbon content is materials equal
to or less than 0.02%.
Tohdai-ji Temple is a wooden building
of the world maximum.

Master Shirataka tried to be suitable for the nails of the West tower in Yakushi-ji temple.
Purity was still low in comparison with the ancient iron.
It wasn't usable for the rebuilding of the tower of Yakushi-ji Temple.
This led to the development of the SLMC iron.

Ancient black smith Ykinori Shurataka ,Okimitsu the 2nd

1935 Born in Matsuyama Ehime prefecture.
1961 It is entered the company by Kiya cutlery of Tokyo.
1971 He come across Tsunekazu Nishioka leader.
1974 40pcs Yarikanna spear plane donation in Yakushi-ji Temple.
1977 He took the order for nail for the West tower of Yakushi-ji rebuilding
1984 He delivered reconstruction product of Ancient tools to Takenaka carpentry tools museum in Kobe.
1996 Winning Ehime Shinbunsya culture prize.
1997 Winning traditional engineer Prize.
1998 Nail making for national treasure Muro-ji Temple restoration.
2001 Winning Eiji Yoshikawa culture prize. (Apr.)
2001 Winning Ehime bank hometown promotion prize.
2002 Nail making for Oozu castle, Matsuyama-jo Castle, Kintai-kyo Bridge rebuilding.
2003 Nail making for Ehime martial arts gymnasium architecture.
2004 Nail making for Nara Heijyoh capital's Daigokuden.
The order from The Japanese Association for Conversation of Architectural Monuments (JACAM)
Winning Ehime person who has rendered distinguished services Prize.(Governor of Ehime Prize)
2006 Winning local culture promotion Minister of Education, Culture, Sports, Science and Technology Prize
2008 Nail making for Toshodai-ji Temple Buddhist image repair
2009 Winning Yomiuri awoniyoshi prize.

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Author N.Kamitani
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Yakushi-ji Nail
SMLC iron 270mm
¥5,000 incl insured freight