

# Fugengama, the depths of natural ceramics

Caterina Roma

**H**idden in a bamboo forest in the town of Kishiwada, not far from Osaka (Japan), Fugengama gives birth to volcanic-like pots after six to ten long firing days. No glaze, just nature accomplishes the wonder of giving colour and beauty to a clay that resists such an intense and sustained heat.

This technique goes back to the first earthenware firings in the old China, where potters realized that flying ashes changed the look of their pots. But it was in Japan where this procedure was actually investigated to be used as a special effect, at the same time that the anagama kilns were imported from Korea, around the fourth century. But the popularity of these rough and uneven ceramics reached its zenith during the sixteenth century, with the development of the aesthetic principles of the wabi-cha tea ceremony, derived from the Zen rituals that emphasized simplicity to the highest degree.

Although many potters use ash glazes today, contemplating these unpretentious long-fired pots that seem to come from the bowels of the earth is completely a different experience.

Fired four times a year and consuming an astronomical quantity of hand and



machine-split cedar and pine wood every time, each Fugengama firing is a great event. The planner and designer behind the Fugengama project is Hiroshi Koyama, a retired Japanese engineer in love with ceramics who, after retiring from his job,

devotes himself to his passion. He and his colleagues, the experienced potters Brian Mahoney and Asakura Keiya built this kiln in 2011 and began their research with great sensibility, experience and knowledge. The fourth member, Inoue Goro, goes



above Team Fugen, from left to right: Asakura Keiya, Koyama Hiroshi, Inoue Goro and Brian Mahoney

left Bamboo forest of Fugengama

right Koyama Hiroshi shaking out embers from hikidashi piece

below Koyama Hiroshi's hikidashi vase red hot



in weekly to help with the massive wood preparation. The firebox chamber of this ana/noborigama kiln, built on a slope, is based on a candle design shape from front to back, where the flames escape and make their way to the upper chamber. This second chamber, with its own stoking door, requires only a small amount of additional fuel after sealing the bottom chamber because it uses the heat generated in the firebox. Behind the upper chamber there is still another one with a basic brick wall inside in the middle to impede the immediate flow of fire out the back, so that the heat hits this wall and goes left and right

before heading up the two-metre endo (pre chimney runway uphill) to finally exit up the two-and-a-half metre chimney. This design greatly enhances a proper flow of flames through the ware and makes the most of this valuable firewood that costs blood, sweat and tears to cut, split and bundle by only four people.

The pieces are thrown and modelled in Shigaraki clay, endowed with a great fire resistance and a brown iron colour that, when fired, highlights their warmth and simplicity. And flying ashes due to continued stoking that settle on the pieces during the firing do the rest. The ash of pine

– a rare and valued wood used specially for its effect – is rich in alkaline materials that, due to the strong heat, liquefy and vitrify on top of the clay pieces and kiln walls. Used as a high temperature flux for its composition rich in calcium oxide, these runny natural ash glazes easily form a characteristic rivulet pattern known as stringing.

For the various colours achieved, the potters rely entirely on the buildup of the pine ash. Sometimes a piece can be sprayed with ash before putting it in the kiln, but the most important factor is the tremendous amount of ash built up naturally due

to continuous stoking and the turbulence of the great fire.

In order to have some control over the highly unpredictable results, one of the most important aspects is the location of the pieces inside the kiln. Predictably, vases closer to the firebox get coats and coats of the different ash types produced during the firing, and can even be covered with embers, while the ones placed in the upper chamber can be only lightly touched by this effect and get a nice fire colour called *hi-iro* or *yakishime*. Air currents created by the kiln structure and the location of the load create micro climates and a flame path that determines the final result. Loading the kiln – known as *kamazume* – is a science in itself, and with long engineering experience like Hiroshi Koyama's, it is definitely a great advantage. What could seem a matter of chance is actually the result of experience, understanding and sharp observation during the complicated unloading operation – the *kamadashi* –, a week after the firing ends.

The complex interaction between flame, ash, volatile salts and metal oxides, as well as the minerals of the clay body give these ceramics a powerful depth. Depending on the firing duration, built up ashes give unique variations in the colourations, which can go from reddish brown where little ash has fallen to deep green-blue and



grey in the final stages: an incredible thick glaze coat plus the matt unmelted ash crust that give pieces an amazingly wild look. In each facet of these three-dimensional pots a deep flow of luscious iridescent natural glaze colour over the slightly melted forms of the strong Shigaraki clay can be admired.

But this group of brave potters did not feel they were having enough fun, and

decided to take a step further and try an old and risky technique known as *hiki-dashi*, which means “to open drawer and remove”. Discovered also by chance, this technique goes back to the sixteen century, when instead of using pyrometric cones, Mino potters placed some of their bowls beside the spy hole and pulled them out with a long stick to judge the temperature reached inside the kiln. The results were so



above Firing Fugengama

left l.t.r Mimi tsuki vase by Asakura Keiya

Collared vase by Brian Mahoney



above Fugengama kamadashi (unloading)  
day, Oct. 2012

right Koyama Hiroshi's vases



dramatic that hikidashi developed as a full technique in its own right.

Bringing back this almost-forgotten procedure, the Fugengama team pulls out its red hot pieces during the firing cycle after a minimum of three or four days, and leaves them to cool down naturally. These pieces, strategically placed in the front part of the lower chamber, are taken out at various intervals to ensure the embers are slowly but methodically being delivered little by little into the depths of the kiln. Hikidashi is carried out in different stages of approximately five pieces each, at eight hour intervals. In their firing in March 2011, 48 pieces were taken out to play with the elements.

These pieces need very strong clay to survive the thermal shock of being taken out of an atmosphere of around 1250-1300°C, and are instantly oxidized.

About thirty potters take pieces to this communal firing, and some of them are there to participate as members of the teams needed for day and night shifts, but

up to forty people go there from all over Japan to help with the firings. The results are worth the effort: the thermal shock brings out a huge variety of bidoro colours, emerald greens with blues, purples and more. Through them, one can almost guess the hard birth that the piece has gone through, telling thus its own particular story.

The Chinese characters of fugen refer to the concept of no limits. Hiroshi Koyama firmly believes that not only are there no limits in what can be done in this type of ceramic activity, but also the develop-

ment of true interpersonal relationships created through the wood firing process at Fugengama has proven to be unlimited as well.

More information at <http://photoaps.exblog.jp/> (Japanese only)

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