Gifts from the kiln gods must be won

by Ian George

Despite admiring fuel fired pots I cannot be alone in starting with an electric kiln, more from practicality than preference. Flames satisfy the imagination where the flow of amps does not. With hindsight however, it was probably the right choice. Its variables are few. Pushing a few buttons before bedtime and waking to a cooling kiln could hardly be easier. The ease and repeatability of firing makes glaze testing much easier and bisque-firing a doddle.

I think the strength and weakness of electric firing is that you tend to get out what you put in. There are surprises, but they are few. Indeed, Cardew argues that for the beginner especially, wood firings are more flattering than the clinical exposure that electric (or even gas and oil) firing brings to mediocre pots. "There are certain subtleties and qualities of colour, texture and depth which wood-firing, properly managed, will give you as it were as a free gift".

These qualities are very evident in work of many renowned potters; not least Svend Bayer and Chris Lewis, both firing with wood. Neither is describable as a beginner!

My experience with electric firing has taught me ways to inject interest into my work in lieu of such free gifts. I have discovered glazes that react strongly to thickness, found exciting combinations of glazes, and even

found a few glazes that are interesting in their own right. I make very small quantities of glaze; normally 200g dry weight and I apply them by pouring or painting. This allows me to have many more glazes than if I made huge buckets of glaze, while the pouring adds its own source of variation.

Finally though, I could restrain my need for fire no longer and started to plot a fuel-fired kiln. My ideas were vague but wood was definitely a given. Soda also appealed because it emphasises the flame path and provides breaks on edges. My first real break came when a friend offered me some kiln bricks. These proved to be heavies, and predominantly arch bricks. One vanload was enough to make a small gas kiln, but not enough for a wood firebox and tall chimney as well. I couldn't forego the wood however and so I decided on a design that would be dual fuelled - wood and gas. After a lot of prototyping with Lego bricks I bought some high alumina to supplement the heavies, and set to work.

I used a mortar mix from Phil Rogers (Ball clay 45, China Clay 10, Grog 30, Molochite 5). Applying a thin buttering of this slip by dipping the bricks made building the kiln very easy for the most part. The arch was a pain because I needed to make something that used exactly the number and shape of bricks that I had. Cutting the heavies was difficult even with an industrial grade 8" angle-grinder so I tried to use them whole. The finishing touches were ceramic fibre back-up insulation and a chimney fabricated from sheet steel.

It was a further year before I found the courage to fire it. In the end I decided that even if the firing wasn't very successful, I should at least learn as much as possible from it. To this end, I made work in many different styles, from several different clays and applied several different glazes and slips.

The firing itself was very easy to 800°C with the temperature racing away on wood alone. I then switched to gas for a rest and to burn out some carbon. The remainder of the firing was on both wood and gas. The kiln always seemed to be short of air. I continually found that turning down the gas actually increased the temperature. I also kept the damper open because the flame always looked smoky. At 1200°C I started introducing soda, first on the wood as a paste and later by spraying it in. I had struggled to get 1200°C, so plans to reach 1300°C had to be abandoned in favour of a soak at 1240 to 1250°C. I then cooled to 1000°C before raking out the firebox and clamping-up the kiln.

Given the trouble I'd had reaching temperature, and the very anaemic test rings, my expectations really weren't high. But, when I opened the kiln, the results were better

than I'd hoped. There were a fair

number of very boring pots but a few that I felt were real crackers.

I suppose what I wanted was to be freed from the active decoration I had grudgingly learnt to do for electric firings and be left to concentrate on form. Ideally I would make a good form, submit it to the kiln and get an interesting pot in return. However, what I

found was that just as for electric firings, the more you put in, the more you get from it. Where you take the trouble to stand the pot on its side, for example, a white slip flashes bright orange. Whereas a single layer of slip or glaze might be dull, several layers can be more interesting. Luck plays its part but you can improve the odds, create opportunities, even when firing with wood. It reminds me of an old joke.

A man pleads with God to help him "Things are hard down here; maybe this week, you could let me win the lottery?" "You are a good and deserving man", God replies, "but meet me half way on this, buy a ticket!"

Outsides

A slip that could be white, salmon pink or bright orange:

Nepheline seyenite 15.
Fired on its side, balanced on shells filled with wadding. Rebecca Harvey clay body.

A thinly brushed-on sequence of copper carbonate in shino, rutile in water and nepheline seyenite, again in water. Rebecca Harvey clay body.

An iron bearing slip:
AT ball clay 50,
China clay 50,

Nepheline seyenite 10.
Wood ash sprinkled on before firing. Earthstone Original clay body.

A porcelain slip brushed Hakame style on to an iron bearing body with sgraffito. Local clay applied thinly as a slip after biscuit firing.

Insides

A wood ash green/blue adapted from Muellbauer and Ruppert worked very well:
Willow ash 40,
Potash feldspar 40,
China clay 10,
Ball clay 10,
Quartz 10.

(not illustrated)

Paul McAllister's honey glaze was great - dark green bleaching to clear on edges.
Potash feldspar 40,
Quartz 30,
Whiting 20,
Hyplas 10,
6% red iron.

(Best shown above, second from left).

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