

Woodfiring with Soda: An Evolution of Studio Interests
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I attended my first wood firing as a high school student. I was fortunate to be an observer during a firing of the kiln of Jeff and Tom Unzicker in Goshen, my hometown. That experience was what got me hooked in clay. As a result, wood firing has been a constant for me over the years, and especially as I've found my own voice in clay.

In 2004 I started to develop an interest in using printing techniques with clay and learning how to transfer words and images onto clay. After learning about many techniques, it was the iron transfer process that resonated with me. It stood out primarily because of its versatility in application methods and its maturation at diverse firing temperature. Specifically, iron transfers can withstand the peak temperatures of a long wood firing.

These two techniques, wood firing and ceramic decals, have led me down sometimes divergent paths over the years. However, they have also regularly pushed me to find ways to reconcile my interests and find ways to make the methods work together. This is one of the primary reasons that I've pursued wood firing with soda over the past four years.

I have found that, while iron transfers can withstand the heat of wood firing, they cannot always withstand the large ash buildups that occur in long firings, especially near the firebox. As a result, I have often loaded my decal ware facing the leeward side of the fire, thus inviting results that will engage the user on all sides of a piece.

I started my experimentation with soda firing slowly. Initially I began using small quantities of wood soaked in a soda ash/water solution, to stoke in the side-stoke ports, just to see what would happen. With this method I could stoke directly on top of several side fired pieces during each firing, getting great ash build-up, and excellent, if subtle, soda effect. I was also able to achieve soda effects on the decal side (leeward) of the pots loaded just beside the side-stoke ports. These pots often became some of my favourite pieces from each firing because of the range of colour and hints of soda.

I found that the iron details that were present as a result of the decals often attracted the soda, thus highlighting the decal work, not obliterating it. Using small quantities of soda, then, added pleasing textures and colours to my wood-fired decal work. I also found that I like the contrast of a tight, thin decal line meshed with a loose form and organic glaze that often makes a successful wood-fired piece.

Knowing that this initial strategy with soda was successful, I began using larger quantities of soda ash, and stoking pieces (of soda soaked wood) not only in the side-stoke ports but also in the front firebox. That has progress into spraying soda into several different areas of the kiln during each firing. I was, and continue to be, especially excited about the subtle grey and orange colours that come from the soda and add a nice contrast to the yellow, brown, green, and red colours I get from the hardwoods that I burn during my firings.

My results with wood and soda continued to be affirming and exciting, leading to some especially nice results at the culmination of a wood firing symposium held in Pittsburgh in the summer of 2009. I remember these results as an affirmation of my soda interests because the success of the firing pleased all the participants, while not overshadowing the primary interest in a more traditional wood fire aesthetic.

However, at about that same time, my family decided to relocate our studios back to our hometown of Goshen, Indiana, leading to a nearly year long break in my wood and soda firing. After the move I spent the next eight months planning and building a new kiln, designed specifically with soda firing in mind.

It has two chambers, and is loosely based on a design in the Lancet/Kusakabe book, *Japanese Wood Fired Ceramics*. I chose the design because I wanted two distinct chambers, allowing a dedicated soda chamber, but also making it possible to fire either chamber independent of the other. Essentially giving me 3 kilns in one. I've fired the rear chamber by itself once, with mixed, but promising, lower temperature results.

I changed the size of the firebox, making it deeper, and hoping to have the opportunity to pull pots into the ash pit at the end of long firings. I also deepened the front section of the

kiln to allow for a side stoke area in middle of the front chamber where pots could be side fired, stoked directly on top of, and sprayed with soda. This was a modification I took from a kiln that Dale Huffman and I collaborated on building in Pittsburgh in 2008.

Some other minor adjustments I made in the design were: blowholes throughout the kiln to monitor stoking patterns, but also as numerous locations for spraying soda; a smaller bagwall in the rear chamber which allows me to continue using lower temperature clays in the top of that chamber; and pushing the bagwall further forward so as to be able to modestly stoke wood directly on top of side fired pots in that space. With these modifications I'm able to get "firebox" pots from 3 different areas of the kiln, instead of just the front firebox.

Because of my studio move, and the break in wood kiln access, I also had to re-focus my production pottery line. Not having access to any reduction kiln meant adjusting my production work to be successful in an oxidation environment. I chose an earthenware clay and a bright, glossy white glaze, and have been firing this line of pottery to cone 04 now for nearly three years.

The break in wood firing and stoneware work has encouraged me to think about the flexibility of this new clay body. I fire my electric kiln several times a week. The ease and predictability of this firing method is reassuring for me as a production potter. But I also miss the unknowns that occur during atmospheric firing. I often pull pieces from my production cycle to include in a wood-firing, perhaps looking for the next great piece!

The flexibility of my new kiln design has been a fantastic way for me to continue experimenting with soda firing and addressing my need for unpredictability. I have been firing the wood kiln for around 70 hours, enabling large quantities of ash to build-up in the front chamber. When I near cone 9 in the front chamber I usually add soda soaked wood in both the front firebox and the side-stoke ports.

The back chamber is used exclusively for soda glazing. I have been utilizing a wide variety of clay bodies, slips, and glazes, and some of the most exciting results have come from using my red earthenware clay and a porcelain slip. This clay matures at around cone 4. The iron in the clay body works well with the iron in my transfers. The porcelain slip receives the soda extremely well, flashing to a brilliant orange. As a result of this success, I've been able to mesh my interests in decals, soda, atmosphere, and earthenware all into one firing process.

I have also been using some mid-range, cone 6 clay, and some stoneware and porcelain. Using a wide range of clay bodies in this chamber has reduced my concern for reaching high temperatures in every corner of the kiln. I can load with pieces made for specific locations, and then maintain a less strenuous firing schedule, knowing the results will be good. I spray a baking soda, borax, and water solution when I approach cone 2. The soda helps to flux any of the fly ash that hasn't melted on the lower temperature clays.

I completed construction of this new kiln in October 2010. To date, I've managed six firings. It's still a new kiln, and my experimentation with wood and soda continues to evolve. The prospect of ongoing attempts to merge my studio interests is an exciting one.

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