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Flash

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FLASH

by

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A thesis submitted in partial fulfillment of the requirements
for graduation with Honors in the Art, Studio

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Spring 2019

All requirements for graduation with Honors in the
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FLASH
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Glaze allows for exciting surfaces, whether it be in an electric or atmospheric firing. While producing these radiant surfaces, glaze also hides the bare clay surface below. For my honors research, I chose the bare clay surface, in the form of slip, in order to explore a technique called flashing. It allows me to create a record of time and space, within the kiln, through a pot.

Surface flashing is a result of metal oxides, such as iron and titanium, reacting with a reduced oxygen atmosphere in a gas or wood kiln. The fire in the kiln wants to burn as efficiently as possible and in order to do so, uses the oxygen molecules in iron oxide or titanium dioxide. This process brings the iron or titanium to the surface of the clay and creates *flashes*. My first test began with a slip recipe that contained roughly 10% iron bearing clay. Slip is primarily made of clay, which makes this surface more stable than glaze, which becomes fluid at extreme temperatures. I applied this batch of slip thickly with my hands. I liked the resulting pots because there was variation in the texture on the surface that I had never achieved before. After being fired, the slip was peeling away where it was applied excessively. This had an interesting effect, which did not take away from the functionality of the pot. Although I had achieved a new texture, I had not achieved the intended flashing. Most of the pots came out a strong red/brown, but I was trying to achieve an orange/yellow flashing. Then I tried applying the slip in thin layers. I did so with my hands, as well as the glaze sprayer. I was much more satisfied with the following batch of pots because there was less intense red/browns and more orange/yellow flashing. I also experienced no peeling or chipping when the slip was applied thinly. The final technique I tried, in order to achieve flashing, was creating a wash of both iron oxide and titanium dioxide. The wash is just metal oxide mixed in water. Knowing that iron and titanium are the primary ingredients needed to promote flashing, I assumed that I would get reds, oranges, or yellows because I had placed the flashing ingredients at the surface. This ended up being the least effective strategy. The surfaces became metallic when the iron was in high concentration and the titanium just turned grey. Ditching the last trial, I did more tests in the gas and soda (atmospheric) kiln with pots that had the slip applied more thinly. Eventually I achieved the orange/yellow flashing I was looking for. Each pot had a distinct identity formed from its specific application of slip as well as its location within the kiln; a record of its place in time and space.

Through working with slips as a form of decoration, I have learned that there are limitless possibilities of variation within the same kiln while using the same material. Oxidation firings in electric kilns produce very repeatable results while atmospheric firings from gas, soda, and wood kilns produce unique ones. It took several iterations to figure out the correct recipe, application process, and firing method. When that was all figured out, I really enjoyed seeing the different results. Each pot looked different because of its location in the kiln (top/bottom, near the burner, near other pots). I am looking forward to investigating slips further. I hope to be able to have an idea of what each pot will look like before it comes out, while also being completely surprised.