

The Cookeville Pottery Company

by

Raymond Lacy

Firing the Kiln!

The kiln itself was a massive igloo-like structure with brick walls 18 inches thick, a marvel of architectural and construction techniques.

The inside was a hemisphere 12 feet in diameter and 8 feet high at the center, lined with heat resistant brick. Beneath the slotted brick floor was a pit 3 feet deep and 12 feet in diameter, leading to a tunnel to the nearby 30 foot cylindrical brick smoke stack.

On the outer perimeter were 6 fire boxes, like giant fire places. At several levels, the entire structure was banded with 4 inch wide steel bands.

The smoke and heat from the fire boxes circulated through the walls, up and over a fire baffle wall, into the kiln--down through the floor and tunnel to the stack.

Access to the kiln interior was through an opening 5 feet high and 2 feet wide, which would be bricked in for the firing.

Loading the kiln was a 2-day job for 1 man plus William and Raymond.

Stoneware, such as butter churns, crockery jars and unglazed flowerpots were stacked in the open with slight air gaps between. Since the stacking went from 4 to 7 feet high, balancing was critical. Unglazed items could be filled with glazed items, such as vases, pitchers, etc., set on tiny pronged spacers.

Other glazed ware, such as miniature jugs, pitchers, ashtrays, cups, saucers, etc., were placed in large containers call saggars--which were stoneware about 20 inches in diameter and 6 inches deep--and could be used over and over again. These containers were stacked as high as possible. The very best pieces of artware would be placed low in the kiln--unglazed--for a pre-firing, and they would be glazed later and fired again at a higher point in the kiln.

When the kiln was loaded, every square inch filled, then it was time to block the access opening.

This was done with firebrick, mortared in, with two access peepholes, one at eye level, one at about 18 inches above ground level. The peepholes were filled with a removable brick.

Cookeville Pottery Company (continued)

Two feet inside the access opening--carefully set on saggars--would be the ceramic temperature cones. These were 3-sided tapered spears, set in blocks of clay--at a 60 degree angle--3 at the top and 3 at the bottom. Each was designed to melt at a given temperature, such as 1800, 1900, 2000, 2100 degrees.

Now the firing begins.

Wood kindling is used to start the fire in 6 boxes, with green hickory slowly added. It is vital that the heat be built gradually.

For 20 to 24 hours, only wood is used to slowly bring the heat up, and gradually coal is added.

Skill and patience is required.

For a high school student working as a fireman, there was time to study, between fire rounds, time to observe the mice at play, perhaps do a few chores, boil a stew pan of black coffee, get scared to death by a local drunk who wanders in at midnight., doze a bit and hope you don't fall asleep and ruin a kiln, and wish the night would end, and your relief would come, and you could get ready for school!

The tempo gradually builds up--the firing and coal shoveling becomes more continuous. You become aware of a great inferno building up. Remember, this is a 60-hour non-stop firing to reach 2100 degrees.

When you're young, you're impatient, and after 40 hours you are sure you've reached the heat required. But wiser heads prevail--until about 56 hours. Then we take the first look through the peepholes. Invariably, no cones have melted.

So, pour on the coal, wait a few hours, check again. Low and behold, the 1800 degree cone has gone down. Keep firing--4 hours later, the 2100 degree cone is slowly melting.

Thank God, it's over!

Now the cooling process takes place, and a great deal of patience is required. Opening too early could cause something to break.

After 2-1/2 to 3 days, the access door is busted out. The escape of heat is over-powering.

Only the bravest will go in at this point--with thick gloves and breath held. To breath is to scar your lungs with 175 degree heat.

Cookeville Pottery Company (continued)

Anxiety is high, because it is vital that the firing was properly done to ensure the quality of the pottery and glazes..

Cracked saggars were a disaster, over-melted glaze just as bad. Bubbles and blisters were rejects.

When it was a bad firing, and too many broken or rejected pieces resulted, it was a sad day for everyone.

On the good firings, you could bring out ceramics of rare and beautiful finishes, unbelievable colors and glaze. Then, everyone involved was proud and excited, because they were a part of an artistic accomplishment, an extremely complex manufacturing process, and had contributed to the company's success!

May, 1995