

Pit Firing in North Carolina

by Dan and Linda Riggs

It was probably soon after the discovery of fire when early humans realized that heated clay became harder, more durable. The fact that clay could be imprinted with shapes and colors applied was an aesthetic plus. Today, the ancient technique of pit firing is becoming increasingly popular because of those aesthetic pleasures, although the shapes and surfaces of the pots reveal the modern touch of artistic form, as well as the calculated use of chemicals and just the right amount of sawdust and wood.

Edge Barnes and Zoie Holtzknecht, two potters from the Raleigh-Durham-Chapel Hill area of North Carolina, are among those who experiment with pit-firing techniques. Although they come from very different backgrounds, they share a passion for surface markings achieved by placing their bisque-fired pots, along with various chemicals and organic materials, in a sawdust- and wood-filled pit.

Barnes generally likes to burnish his leather-hard pots with a stone. This is followed by buffing with

plastic or a soft cloth to increase the shine. Holtzknecht, on the other hand, likes a rougher finish and focuses more on developing color on the surfaces of her pots. Flashes of color on pit-fired ware are achieved by intimate contact with volatile materials, such as copper and salt.

For example, Barnes often wraps part of a Chore Boy copper scrub pad around a pot, holding the stretched wire in place with hot glue from a gun. The copper wire can also be covered with slabs of paper clay, which act like a saggar, trapping the vaporizing copper next to the surface.

A more conventional technique involves the addition of copper sulfate to a saggar. Barnes uses a metal bowl for the saggar, adds copper sulfate, then the copper-wire-wrapped pots, peanut shells, cotton balls and rock salt, covering the arrangement with an inverted ceramic bowl.



Ovoid vase, 8 inches in height, wheel-thrown stoneware, bisque fired to Cone 09, wrapped with steel wool and copper wire, gas fired to 1500°F in a loose saggar filled with oak chips, copper sulfate crystals, sea salt and seaweed, by Edge Barnes, Raleigh, North Carolina.



1
Copper mesh can be held in place with hot glue.



2
Metal and clay bowls are used as a saggar.



3
Thin slabs of paper clay will trap fumes near the surface.



4
Holtzknecht prepares a firing bundle with a mixture of volatiles and combustibles.

Another method involves placing the pot on a large piece of newspaper, wrapping or draping it with steel wool or copper wire, and sprinkling copper sulfate and rock salt over and around it. Combustibles, such as cotton balls, banana peels, dry dog food, dried flowers, etc., are then placed on the newspaper, which is subsequently rolled around the pot. The newspaper holds the sulfate, salt and combustibles in close proximity to the pot's surface, where they will add interesting designs and colors.

Once the pots are ready for the firing, the next step is to prepare the pit. For the firing shown here,

Barnes and Holtzknecht used a large pit, dug by a backhoe to a depth of about 16 inches. Some people prefer shallower pits to produce brighter colors; others prefer pits as deep as 4 feet.

Over a loose bed of wood and newspaper, they laid a course of very dry sawdust (4 to 5 inches thick). While the newspaper-wrapped pots and metal-bowl saggars could be nestled



Bowl, approximately 8 inches in diameter, wheel-thrown stoneware, pit fired in oak chips, surrounded by copper sulfate, raw cotton and coarse steel wool, by Zoie Holzknacht.



Bottle, 10 inches in height, gas fired to 1500°F in a loose saggar filled with oak chips, copper sulfate, sea salt, seaweed, steel wool and copper wire, by Edge Barnes.



Edge Barnes sprinkling baking soda around a copper-wire-wrapped pot nestled in the sawdust.



Barnes carefully brushing aside ash and debris to remove the fired ware from the pit.

right next to one another in the sawdust, the “naked” pots were spaced several inches apart. Copper sulfate, baking soda and rock salt were then sprinkled around the pots. Dry dog or cat food, banana peels and seaweed could also be added.

A 2- to 3-inch-thick layer of sawdust was poured over the pots, then several feet of wood. Barnes prefers to use thin wood strips, as these burn much quicker and hotter than thicker pieces.

The fire was started with a torch in four or five places, so that the combustibles would burn evenly throughout the entire pit. When it had burned down somewhat, an-

other 1- to 2-foot layer of wood was added.

The pit was then left to burn out. The pots were retrieved only when they were cool enough to handle. Removing ware too early can cause cracking.

Pit-fired pots can be cleaned and lightly polished by rubbing with a cloth. For a brighter shine, wax can be applied; Barnes uses Butcher’s Wax.

There are probably as many variations in pit-firing technique as there are potters, which makes every piece unique. The thrill of discovery exists each time the cooled ashes are pushed aside.