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THE PIT-FIRING PROCESS



The ancient process of pit-firing ceramics started independently around the world and is still regularly used in the indigenous non-industrial communities of Africa, Mexico, S American, India and SE Asia. I use it as a creative tool to communicate my artistic ideas.

Pit-firing is an unpredictable process – producing results that can give me extreme delight as well as frustration. The techniques are relatively simple – however the success depends on experimentation and observation.

My work is hand built using heavily groged, white Raku clay, which gives good results when burnished.

I am restricted by the size and shape of my pieces. Too large, flat or work with uneven thickness are liable to crack. In the pit the pieces are not slowly heated up as in a kiln, but are heated up irregularly, thus causing frequent breakages.

My work is heavily burnished, terra-sigulata is applied and then left to dry completely.

A bisque firing of 950-1000C is followed by the application of various materials. These materials have the potential of developing rich organic colours and patterns on the clay surface – this depends on the temperature and oxygen/carbon dioxide flow inside the pit.

I execute my pit-firings in various locations, including the seaside, using locally sourced materials. A rectangular pit is dug into the wind approximately 2ft deep. When on the beach I shore up the sides with corrugated sheets which are kept in place by steel rods to avoid collapse during the firing.

The prepared work is placed on a bed of wood shavings inside the pit. Salts, oxides, seaweed, coffee grounds and any other suitable organic material are placed on and between the pots. Layers of wood, pinecones, kindling, newspaper and hay are piled on and ignited from the top; slowly the fire will spread across the pit.

After at least 20min of fierce burning the pit is covered with corrugated sheets to allow a slow, hot fire to burn. Vents are left at either end of the pit, to facilitate good air flow.

The fire takes several hours to burn down, potentially reaching temperatures of 925C. Each pit-firing burns differently depending on the materials, the outdoor temperature, wind speed and humidity. It takes several more hours for the pit to cool down. If the pit is opened too early, breakages can occur from thermal shock. As I sift through the ashes in a newly fired pit, I equate the feeling to that of an archaeologist working on an excavation – I never know what I am about to find, sometimes the results are not as good as I had wished for; but often the pit delivers incredible treasures.