

Sacramento State Woodfire Process

This communication is to provide notice that the Department of Art will be using its low emission wood-fired kiln on campus. The kiln, commonly referred to as the “smokeless kiln” was designed by Japanese ceramic artist Masakazu Kusakab. This kiln facilitates a wood-fired process allowing students to create unique effects on ceramic pieces by allowing the wood ash to melt onto the ceramic ware, as well as allowing flames pass through the work.

This process serves significant pedagogical and creative purposes. Using the kiln is a labor-intensive process, requiring students to work together and develop an understanding of the elaborate woodfiring process. The availability of this kiln helps to distinguish Sacramento State’s ceramics program. The Department of Art is open to visits and questions from students, faculty, and staff interested in learning more about the process.

The kiln was designed to be its own “catalytic converter” The kiln burns clean dry firewood and only produces a campfire smoke odor in the beginning of the process until the kiln reaches sufficient temperatures to combust the smoke. No lead is used in this process and metals such as copper and cobalt are used sparingly. The kiln has been tested extensively by the Sacramento Metropolitan Air Quality Management District and the process has been determined to be well within the acceptable particular emission standards. Dr. Scott Parady, a professor in the Department of Art, is responsible for supervising the process for each full firing cycle.

Please contact Jacob Peterson in Environmental Health and Safety if you have environmental or safety questions (278-4833, jacob.peterson@csus.edu).

Please contact the Department of Art office (916-278-6166) if you are interested in learning more about the woodfiring process.

FAQs

Q: How long has the kiln been used on campus?

A: Since 2009.

Q: I understand that lead and other heavy metals are used in pottery glazing. Does the firing of the wood kiln release metal fumes into the environment?

A: No lead is used in this process at Sacramento State and no toxic fumes are released into the environment by the kiln.

Q: Why do you use wood rather and electric or gas kilns? Doesn’t wood fire cause more pollution?

A: The effects produced by the wood firing are unique to the process and cannot be emulated with applied glazes. The finish on the ceramic pieces comes from direct contact with the flames and the wood ash melting onto the clay surface. The volume of pollution is relative to the size of the kiln and relative volume of works to be fired, as the wood kiln is at least double the size of any of our other kilns and requires far less glaze to be used. It would require a similar amount of firing time to run multiple small kilns ending up with the same volume of work.

Q: What materials are used to fuel the kiln, and why does it seem to produce more smoke at times?

A: Dry hard and soft firewoods are used for fuel. Soft woods are used at the beginning of the process and hardwoods are later added to produce coals in the kiln and aid in slow cooling. We avoid pitchy pine as it has proven to create more smoke.

Q: Does the Sacramento Metropolitan Air Quality Management District (SMAQMD) allow the use of wood-fired kilns?

A: **Yes.** During the Fall 2016 semester, a third-party Source Testing Consultant monitored the air emissions from the Kiln operation and determined that they were within the allowable limits set by the SMAQMD. The Art department also moved the scheduled burn times to ensure that the kiln operation will not occur during the SMAQMD's "Check Before You Burn" periods between November 1st and March 1st.

Q: Are wood-fired kilns common in university art programs? Are there others in the CSU system?

A: It is estimated that approximately half of ceramic programs nationwide have woodfired kilns. At least two other CSU's have wood kilns and several community colleges in this region.

Q: Who is responsible for the operation of the kiln?

A: Professor Scott Parady is on campus for the duration of each firing.

Q: Can I see the kiln, or the materials made in the kiln?

A: The Department of Art is always open to sharing the process with interested individuals. Please contact the Department of Art office (916-278-6166) if you are interested in learning more about the woodfiring process.

Q: Why is the kiln fired during the week, as opposed to the weekend when less people are on campus?

A: The kiln is fired during the week to make the most of scheduled class times and class involvement. This process builds a strong community amongst students as they work together on this labor-intensive endeavor.