

# Lava Casting for Sculptural Applications at Thamkrabok Monastery in Phra Puttabath, Thailand

Photo Essay

JOHN WALTERS

University of Michigan

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## AUTHOR BIOGRAPHY

John Daniel Walters is an interdisciplinary studio artist at the crossroads of the visual arts, vehicle restoration, cultural documentation and social mobility. His work encompasses aspects of architecture and landscape design, metal fabrication, figurative sculpture, mixed/digital media installations, and sustainable system and alternative fuel applications. He is currently a third year MFA Candidate at the University of Michigan in Ann Arbor. He received his BFA from the University of Nebraska, Lincoln in 2003 and has been active in the creative arts for over ten years.

The following photographic essay is descriptive of a lava casting process developed by the monks at Thamkrabok Monastery in Phra Puttabath, Thailand. I am a bronze sculptor in the MFA program at the University of Michigan, Ann Arbor and spent one month in residence at Thamkrabok Monastery in 2008. During my residency at Thamkrabok I researched this unique fine art basalt casting process that was developed by the monks of Thamkrabok to construct very large ceremonial figures throughout the confines of the monastery. This rare casting technique is of interest to me as a new medium for my artistic practice, which is less resource intensive than bronze casting, but still archival in its quality.

In addition to my investigation into basalt casting, a more conceptual investigation took place concerning non-western perspectives on the issue of substance abuse management, a central theme in my past creative work. Thamkrabok Monastery is heralded as one of the most difficult drug rehabilitation programs in the world, combining various ceremonial practices, manual labor, and a personal commitment to sobriety as key aspects to recovery. Many of the monks who reside at Thamkrabok have been through the rehabilitation program and now choose to stay there.

During my residency, I was introduced to Phra Thong, one of the four adjunct monks at the monastery who was also formally trained in the arts. An adjunct monk is one who is both considered a teacher within the monastery and who is well on his way to enlightenment. As a resident at the monastery, I participated in a series of daily duties, one of which was sculpting for five hours every afternoon on a beeswax figurative form of the late Luoang Pau Charoon, one of the three founding monks of Thamkrabok. During this time, I would speak with Phra Thong about the methods used for casting large basalt objects, such as mold construction, material usage, fuel sources, basalt mixtures and finishing techniques.

Being that it was the wet season in Thailand during July, I was unable to witness a basalt pour first hand, but I did study various sculptures, some that were fully completed and some that were in the process of construction. The

processes used to melt the basalt are not unlike the process used in the United States for contemporary fine art iron casting, but Thamkrabok's recipe for making basalt is unique. The materials for making basalt are of partial recycled origin, which makes it a welcome alternative to traditional bronze casting that is very energy intensive. The result is a sculpture of volcanic rock that is hollow and approximately one to two inches thick depending on the shape and quality of the mold.

The finished forms are ceremonial objects, most of which are in the form of Buddha in an enlightened state, designated by the flame atop Buddha's head while in seated position. There are a number of other forms including serpents, standing monks, monolith forms, and commemorative statuary of past Abbots of Thamkrabok. This photo essay illustrates the lava casting process from photos given to me from the archives of Phra Thong and from photos taken by myself. I have also digitally processed each photo to increase its clarity and for consistency in presentation.



Three Witnesses  
Digital Print

*Three Witnesses is the central ceremonial platform at Thamkrabok. The three central monolith forms symbolize the three founders: Luangpoh Yai, Luangpoh Chamroon Panchand, and Luoangpoh Charoon, an aunt and her two nephews respectively.*



Six of the Twenty-Four Witnesses  
Digital Print

*Surrounding the central monolith structures is a semi-circle of Buddha figures known as the Twenty Four Witnesses. During my time there, I observed one of the monks refurbishing these older statues using cement in a stucco application and black paint to achieve a consistent surface tonal quality.*





Left:  
Decay in Form  
Digital Print

*This photo shows evidence of the decay of these large forms. The inner steel architecture of these forms has begun to rust and break apart the lava shell that it supports. The moist climate and porous nature of basalt enabling this process further. Refurbishing is therefore often necessary for forms made in this manner.*

Right:  
Making Lava  
Digital Print  
Phra Thong Archive, 2000

*The monks melt basalt ingredients in a large cupola fueled with coke and air. This huge furnace produces enough basalt to fill a ladle as shown, which is hoisted into a pour position using available machinery. Depending on the recipe, once cooled, the lava can take on hues of red and blue as seen by a collection of examples provided to me by Phra Thong.*







Left:  
The First Level  
Digital Print  
Phra Thong  
Archive, 2000

Here a pour team works to fill the lower portion of the mold. They maneuver the large ladle with utmost precision and teamwork. Many men are needed to help plug holes and keep the mold intact.



Pouring the Figure  
Digital Print  
Phra Thong Archive, 2000

This process begins with the construction of a large mold made of earth and wire. When pouring the lava, the monks must start from the bottom and move upward at a steady pace. The large earthen molds contain a number of entry spouts that allow the crew to reposition the pour vertically as the mold fills.





Breaking the mold  
Digital Print  
Phra Thong Archive, 2000

*After the lava has cooled, the earthen mold and supporting cage are removed to reveal the figure within. A similar wire structure within the thin lava shell cannot be removed and is left permanently left inside. This inner cage contributes to the previously described decay of these large sculptures.*

Luangpoh Yai  
Digital Print

*There continue to be projects of vast magnitude being performed at Thamkrabok. Recently a monolith structure with a commemorative figure of Luangpoh Yai was constructed to the north of the Twenty-Four Witnesses. These structures are truly awe inspiring due to the original nature of the materials used for their construction and the colossal height at which they stand.*

