

Panel Proposal: Cleaner/ Greener De-waxing; Boiling out Ceramic Shell

Abstract:

Burning out wax from ceramic shell molds is the standard practice used in both art foundries and industry. It is efficient, relatively easy, and time-saving. However, it also requires a kiln, creates fumes and particulate, and consumes some of the wax.

With the boil-out method the process is cleaner, safer, and reclaims 100% of the wax. Panelists will present their individual methods for boiling-out, discuss the pros and cons to using the boil-out method, and why they have switched solely to this method.

Background:

After RIT built a new foundry and iron casting courtyard in 2008-9 I found out quickly we had new problems with burning out shells. Using our same burn-out kiln as before we were suddenly a problem because of the air flow. Our inside ventilation could not handle the smoke from the burn-out, and outside in the courtyard the smoke went into the air intake for the entire art building.

I had already been intrigued by the method of boiling-out shells, and had attended a presentation by Professor John Hachmeister and Josh Dow at the first Western Conference on Cast Iron Art in 2008. At that time I was an "un-believer" and weighed the "cons" of the process over the "pros". After necessity dictated our change to this method I still weigh pros and cons constantly, sometimes miss the burn-out, but enjoy the 100% reclaimed wax, and also enjoy not upsetting my colleagues.

Knowledge of this method will help anyone dealing with ceramic shells evaluate their own process and compare set-up costs, cleaner environments, and time consumption.

Potential Panelists:

Professor John Hachmeister, University of Kansas, and I have been in contact about this proposal. Professor Hachmeister will be visiting RIT before the conference and we are both willing to present either a demonstration and/or a workshop before the conference on the boil-out method of de-waxing ceramic shell molds.

If the panel is accepted I would also like to invite Josh Dow, from the Green Foundry since he also has been practicing this method and has developed a personal approach to boiling out molds.

I also am working with Remet to find an expert to discuss the how this method can/ does affect the ceramic shell as opposed to burning-out.

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