



100 TIPS, TOOLS, & TECHNIQUES

for the ceramics studio



Edited by Ash Neukamm

The American Ceramic Society
600 N. Cleveland Ave., Suite 210
Westerville, OH 43082

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ISBN: 978-1-57498-380-6 (Paperback)

ISBN: 978-1-57498-599-3 (PDF)

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Publisher: Bill Janeri

Design and Production: Melissa Bury

Editor: Ash Neukamm

Associate Editor: Jennifer Poellot Harnetty

Front cover images: Bulb-glazed tile by Thomas Gelsanliter, top; throwing gauge by Mea Rhee, middle left; trimming chuck by Mike Jabbur, middle right; leveling tool by Elisa Helland-Hansen, bottom.

Back cover image: Balloon-slipped jar by Ron Philbeck.

Printed in USA

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021

DIY Peeps

by John W. Conrad

One piece of equipment in the ceramic studio that breaks easily is the peephole plug. They're often bumped on the kiln, dropped and cracked, misplaced, broken, chipped or worn out. Fortunately, there are several ways to make new plugs to replace the old ones, with the advantage that each plug can be custom fit to each peephole in the kiln. Making the plug by handbuilding, throwing, or cutting

brick does not require any additional special tools or techniques.

ANATOMY OF A PEEPHOLE PLUG

Most peepholes are $\frac{3}{4}$ –1 $\frac{1}{4}$ inch in diameter and range from about 3–5 inches in overall length. The bottom 1–2 inches form the handle. The handle is wider than the opening, which makes holding and handling easier,



Soft brick cut in half then in fourths, hack saw to taper cut the four corners and finished with coarse sand paper. The one on the far right is finished and ready to use.



Collar in to close off the top of a thrown cylinder, then use a rib to define the collar where the peephole plug meets the outside of the kiln.



Create a one-part mold of the form by using a cardboard tube. Seal the bottom and pour plaster over the peephole plug.



Roll a wooden rod inside the cylinder to shape the handbuilt peephole plug.

keeps the handle cooler, helps reduce heat loss, and prevents the plug from going too far into the peephole. Peephole plugs are often only fired to bisque temperatures as they are subjected to extremes of temperature from the inside to the outside of the kiln. The inside could be close to 2300°F, while the outside might be 100°F. Bisque-fired clay is open enough to resist this thermal shock.

INSULATING BRICK

Using a hack saw, cut a 2000–2400°F-rated insulating block to 1½×1½ inches in height and width, and to a length of 4½ inches. Cut this into four equal parts, then taper the four corners of each. Next, sand each peephole plug with coarse sandpaper and a rasp to form a truncated cone shape, leaving the one end square to serve as the handle. The end that goes into the kiln should be ¾ inch in diameter (1). Additional sanding may be necessary to shape the cone to fit the kiln peephole. **Note:** Insulating fire brick contains silica. Wear a dust mask when cutting and sanding to avoid inhaling the dust.

CLAY

Any high-fire clay can be used for throwing or hand-building a peephole plug. The final shape should take into account shrinkage and the tapered peephole opening. Most high-fire white or light-colored stoneware, porcelain, or sculptural clays suffice to make a plug. Avoid using iron-rich clays as iron is a flux, especially at higher temperatures, and could cause problems. The end of the plug during the firing reaches high temperatures nearly the same as inside the kiln, thus low-temperature clays should be avoided.

WHEEL THROWN

To throw a peephole plug, open the clay to about ½ inch wider than the peephole (plus more for the shrinkage of the clay body) then shape into a cylinder (2). It is further fashioned to a slightly tapered peephole plug shape, and then the top is pushed over closing the hollow shape. A rib or template shape is cut to the peephole plug contour making it easier to finalize the shape. The form is allowed to stiffen

and used as a model for making a slip-cast form (3) or used as is.

HANDBUILT

Roll out a slab of clay, cut a trapezoid shape and curve it into a hollow cylinder about 5 inches high and a diameter that, when shrinkage is calculated, fits the peephole. Roll the top to make a collar. This becomes the handle. Allow it to stiffen, then flare the bottom 1–2 inches by inserting a dowel rod or tapered paintbrush handle into the opening (4). Roll and shape the cylinder to form a hollow plug. Complete any additional shaping with a rib. Push the end of the plug over to close, leaving only the handle side open.

SLIPCAST

Secure a leather-hard peephole plug model to a smooth surface. Place a cardboard cylinder that's 1½ inches wider and ½ inch higher than the casting plug over it. Coat the interior of the cylinder with mold soap to make it easier to remove later. To hold the cardboard in place and prevent any plaster from leaking, press a clay coil around the outside. Mix plaster and pour it into the tube to fill it. Slightly vibrate the table under the cardboard to settle the plaster and bring the air bubbles to the surface. Remove the cardboard once the plaster is set, then allow it to cure. The clay model will shrink and fall out of the mold during the drying process.

Slip casting from this plaster mold provides an easy way to make peephole plugs. Pour a high-fire, low-iron casting slip into the mold and allow it to set, forming a ¼ inch thickness. Pour out the excess slip. Once it releases from the mold, trim it, sponge it smooth, and allow to dry. After bisque firing, it is ready to use.

FILLED PEEPHOLE PLUG

A solid or filled peephole plug is stronger, harder and adds insulating properties. To make a filled peephole plug, a hollow, cast peephole plug can be filled with a variety of mixtures including: sawdust/coffee grounds with a liquid clay mixture, vermiculite, grog, crushed insulating brick crumbs, ceramic fiber, or a combination of these. If filling with a liquid clay mixture, do this prior to the bisque firing.

059

Fitting Spouts

by Tiffany Hilton

Fitting teapot spouts can be a difficult task. Try using a circle template to make the process easier.

Making teapots can seem like the ultimate challenge. Cutting spouts at the right angle to fit the body has always been the hardest part for me. Recently I had a revelation when I thought to use one of my circle templates to trace a line at the angle I wanted while fitting spouts (2). These plastic templates are readily available at your local art supply store or online and come in various sizes.

A practice that I keep and recommend to my students is to always throw several spouts for each teapot so that you have multiple options to choose from. Try making teapots in a series of 3 or 4 at a time and throw at least 8 spouts to work with. Start with a larger diameter circle that fits your spout and move the spout to find the angle you are looking for (3), then mark the

line and cut with a knife (4, 5). Remember you can always cut more or adjust the angle slightly as you work to find the right fit. Attaching spouts at a soft leather-hard state offers the best results as you can still mold the cut edge to fit the body (6, 7).





1 Tiffany Hilton's teapot, wheel-thrown stoneware, fired to cone 8 in oxidation, 2015. *Photo: John Polak.* **2** All of the tools (including the plastic circle templates) used to fit and attach a teapot spout. **3, 4** Use the circle template to determine what angle the spout will need to be cut at and trace a line. **5, 6** Cut with a sharp knife and smooth off the edges for a clean line. **7** Test your fit and make adjustments as needed before attaching the teapot spout.

083

Balloon Slipping

by Ron Philbeck

Balloons aren't just used for decoration at parties and celebrations, they can also be used as an effective tool for protecting a pot's interior while applying slip and glaze.

Over the last 20 years I've put slip onto leather-hard pots in just about every way imaginable. From forms such as small cups up to large platters and bowls, I have found various ways to get slip on my pots.

Recently, I have been inflating a common latex balloon (1) inside my jars to keep the slip or glaze from getting into the interior while coating the exterior. I always enjoy having a bit of fun and taking risks in the studio, which is how I discovered that small- and medium-sized convex-shaped pots can be held and lifted up by holding the top of the inflated balloon, allowing me to fully apply slip without getting any on the inside of the form.





To try this in your studio, wax the foot of the pot. Blow up a balloon inside the jar (2) and hold it tightly. It's not necessary to tie off the balloon as long as it is twisted and held securely closed (3). Next hold the pot over the slip bucket and pour slip onto the pot (4). **Note:** If you have enough slip in the bucket to cover the entire pot, you can try dipping it into the slip.

The balloon forms a seal in the mouth of the pot and prevents any slip from entering the interior. After the jar is slipped, tilt it and give



a shake to allow excess slip to drip off the pot. Use a damp sponge to remove any material lingering on the waxed foot (5). When finished, the jar is set down on a clean ware board and the balloon is deflated and removed before the pot is left to dry (6).

This technique works great to apply slip or glaze to almost any sized pot. For a heavier form, instead of suspending the pot, place it on a banding wheel over a basin to catch the excess slip or glaze that is poured on.

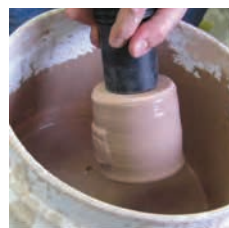
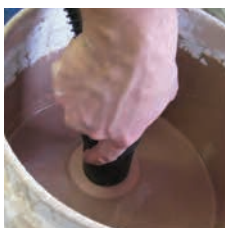
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The Vacuum Dip Method

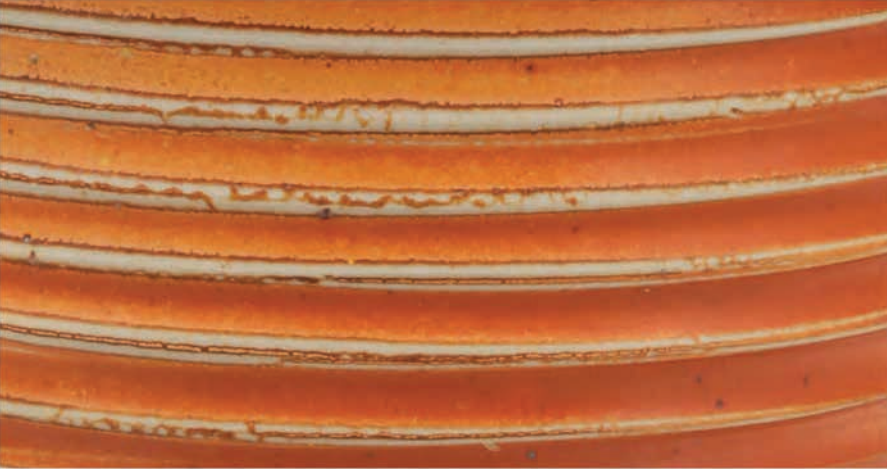
by Todd Ferguson

Using a shop vacuum to aid in glazing smaller pots (1–3 lbs.) eliminates the need to wax and wipe the bottoms.

Glaze the inside of the pot first and allow it to dry, then turn the vacuum on and attach the hose to the bottom of the piece. Dip the piece up to its bottom and pull out. Dipping it straight down to trap air inside will minimize glaze overlap and pulling out at a slight angle and then rotating the pot will prevent lumps and excess glaze drips from forming on the lip. Flip the piece right side up with the vacuum still attached and turned on. Shut the vacuum off and slide the piece onto a dry surface. This same procedure also works very well for smaller bowls.



For heavier pots (4–5 lbs.), leave the vacuum on while the piece is still inverted and wait for any glaze on the bottom of the piece to dry. Now you will be able to hold the piece and assist it as you flip the hose upright. Without the extra support, the heavier pieces will fall when at an angle.



Ceramic artists are some of the most inventive people around, and *100 Tips, Tools, & Techniques* is a testament to their ingenuity. Compiled from the *Ceramics Monthly* and *Pottery Making Illustrated* archives, this book is divided into five sections: Studio Setup, Gadgets & Gizmos, Making, Surfaces, and Upkeep & Business, which address all facets of your studio needs.

You'll discover how to easily reclaim clay, build custom ceramics tools, create repeated patterns with simple tools, glaze using unconventional techniques, and much more! Each tip is jam-packed with helpful information from professionals and hobbyists that have been working with clay for many years. With these 100 tips and tricks, you'll improve your efficiency *and* proficiency in the studio.

Ash Neukamm is the Assistant Editor of Publications, where she guides the editorial content of The American Ceramic Society's Art Books Program. Neukamm holds an MFA in Visual Arts with an emphasis in Ceramics from The Ohio State University, a BFA with a specialization in Ceramics and a minor in Art History from the University of Florida, and maintains a ceramics studio at her home in Columbus, Ohio.

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