

Pottery Making

I L L U S T R A T E D

May/June 2002

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Broken glass raku

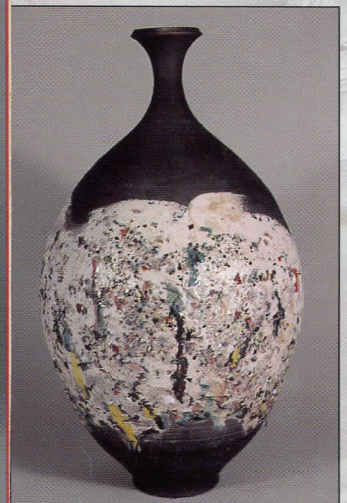
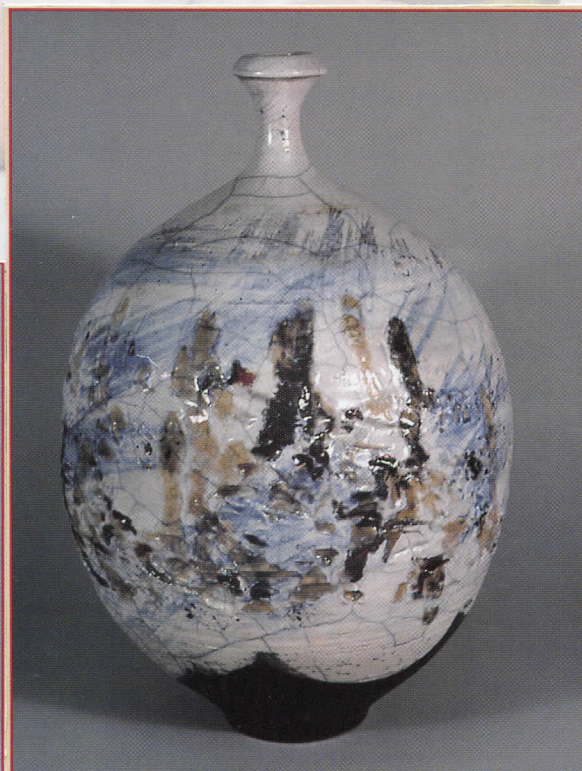
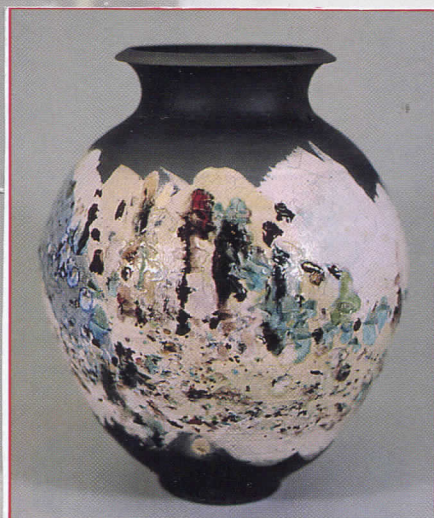
Black-firing

Hot-glue textures

Down to the wire

Test tubes

... and more!



Techniques • Tools • Tips • Projects for the Studio Potter

INLAID GLASS TECHNIQUE

by Steven Branfman

Of the questions asked of me at workshops and demonstrations, the most frequent center on the subjects of personal style and the generation of ideas. How to develop a distinctive appearance in your work and how to continue to come up with new ideas can be an intimidating and even forbidding responsibility. Making a personal statement in clay does not demand special attention.

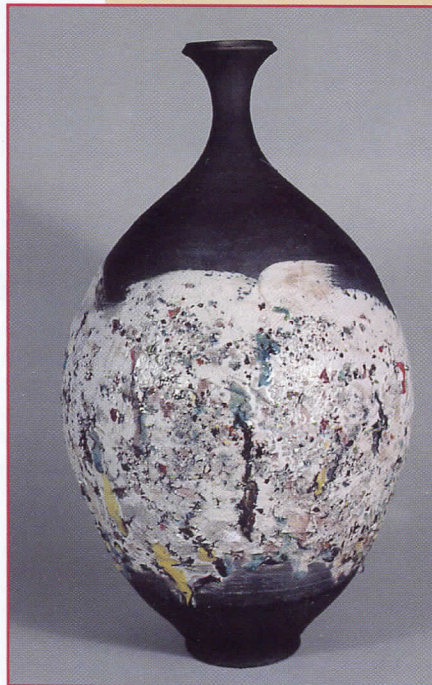
Regardless of what your pots look like, almost from the start, your own identity and ownership of that identity will be apparent. However, keeping your work fresh and your excitement about clay alive may require more deliberate effort. Here are a few conventions to facilitate the generation and discovery of new ideas.

- Think less about what your pieces look like and think more about how they feel to you, physically and emotionally.
- Set up some technical, aesthetic, or intellectual limitations and boundaries and force yourself to work within them.
- Simply try out some method—forming, surface treatment, glazing, or firing—that you have never done or had much success with before. See it through to the completion of a minimum of, say, 10 objects, and see where that exercise takes you.

It also helps to study, understand, and come to grips with the whole theme of ideas, originality, expression, and personality. It has been said, and I agree, that there are no new ideas, only new combinations of things that have already been done.

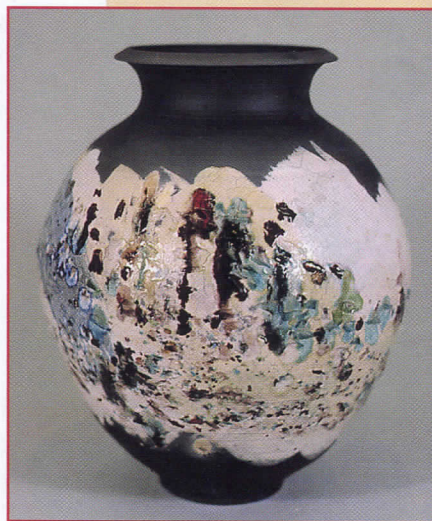
COMBINING CLAY AND GLASS

I began incorporating glass into my work about 25 years ago as an effort to unite two apparently similar materials. Clay and glass are at least cousins if they are not siblings, and although clay was the material that I was connected to, glass held a certain interest.



POTTERY PHOTOS: STEVEN BRANFMAN
PROCESS PHOTOS: JARED BRANFMAN

Vessel, 19 inches high, Basic White Crackle glaze. **Note:** All work shown here is thrown using the techniques described in the article and raku fired. Post-firing reduction is done in metal cans with coarse sawdust, wood shavings or dry pine needles.



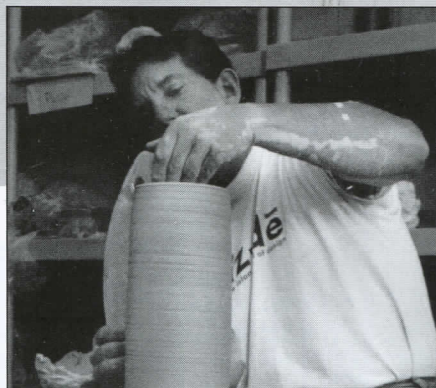
Vessel, 18 inches high, Rogers White (clear) glaze. Colors, patterns, and textures created by the glass covered with a clear or white glaze are design elements strong enough to stand on their own. However, depending on the effect I want to achieve, I use glaze of different thicknesses to vary the melting of the glass and glazes of different varieties to add additional color and texture.

FORMING A CYLINDER



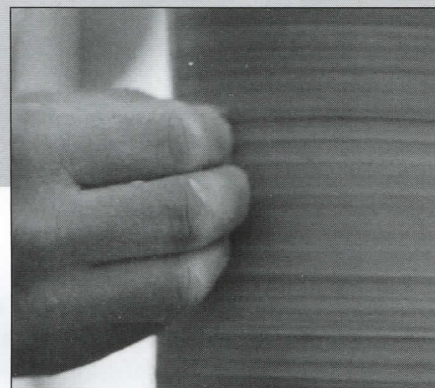
Step 1

You must throw your form on a bat. Plastic bats that tend to bend are not recommended until you have more experience with this technique. (You'll see why later.) After using liberal amounts of water for centering and the first few pulls, I dry my hands to throw the rest of the clay completely dry.



Step 2

Note how little water is visible in the photos. Dry throwing leaves the cylinder strong and able to withstand the stresses that the clay will have to withstand later in the process. The cylinder must also be formed with very even walls that are left thick enough for the glass to be embedded and subsequently expanded. Dry throwing is a skill all to itself and one that will take a lot of practice to master.



Step 3

When you complete the forming, the clay should feel somewhat stiff (though not nearly leather hard) and dry to the touch. Depending on how dry you throw, you can put the cylinder aside until the surface wetness dries. If you do that, be sure to maintain even drying, not allowing the cylinder to warp or bend and not allowing the rim to get dry. **Tip:** Before you lift the bat off the wheel, mark the pins and corresponding holes in the bat so you can put the bat back on the wheel in the same orientation.

My first efforts involved incorporating the glass as “windows” through the surfaces of my pots, connecting the glass in the fashion of leaded-glass technique with clay cutouts in the wall of the vessel acting as the frames for the cut pieces of flat glass. At the same time, I was using bits of glass as decorative elements by laying them flat inside bowls, dishes, plates, and platters, and allowing them to melt into the surrounding glaze. Combining these two materials proved to be much more difficult than I had thought it would be. These experiments with glass took place along side other work that was proving to be much more interesting and engaging and soon my interest in the glass all but disappeared.

It wasn't until some years later that the glass idea re-emerged, although from a completely different perspective. From very early, my pots have been about the relationship between the surface of the ware and the form. As I matured as a potter and a maker of vessels, my understanding, interpretation, and representation of the vessel became, and continues to become, more precise, sophisticated, and personal.

How the interior space of a pot shapes, defines, and gives life to what we see on the outside is elemental to how I conceive and make my ware. I form pots from the inside out and the bottom up. And while pressure and force on the outside of the clay during the throw-

ing process is a key element to controlling the shapes and sizes of the forms, it is the inside pressure that I exert that actually creates the pot.

The surface of a pot is more than a simple canvas upon which to decorate or embellish. It is a skin that contains and thus expresses and communicates all of the power within. The incorporation of crushed and inlaid colored glass is yet another method I use to articulate and embody that power.

As with most craft methods, there are many nuances of technique, method, and personal style that are not possible to demonstrate within the limitations of the printed word. Start your experiments with small amounts of clay and simple shapes building up to larger, more complex forms as your skill improves. Don't be satisfied until you have incorporated this new method into your own language of shape, color, texture and form.

METHOD

There are four steps to the technique:

1. Forming a cylinder
2. Inlaying or embedding the glass
3. Forming the shape by expanding it from the inside out
4. Finishing the piece.

Although my work is all thrown, with modifications you can easily adapt this technique to slab work.

PREPARING THE GLASS



Step 4

While the cylinder is setting up, I prepare my glass. I use random varieties of flat, colored glass used by stained glass workers. You can use any type of glass available to you, including bottle glass, marbles, and glass rods. Wrap the glass in canvas and simply crush it with a hammer.



Step 5

On the table I lay out my glass carefully choosing colors, sizes of glass (from large pieces to dust), and the arrangement of the glass in patterns and shapes visualizing how these patterns will transfer to the surface of the clay.



Step 6

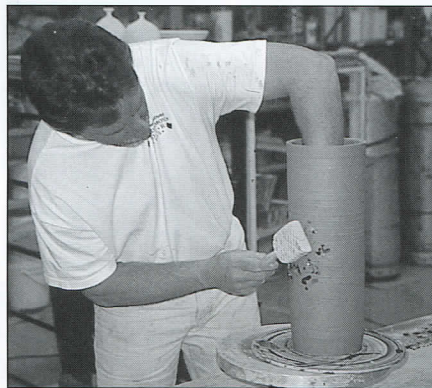
The cylinder will be rolled onto the glass, so as you lay it out pay attention to how close to the rim and the foot the glass will be inlaid. You must be able to finish throwing the neck and rim of the piece without touching the glass and then trim the bottom and foot (if you choose to trim) without running the tool over the glass.

INLAYING AND PADDLING THE GLASS



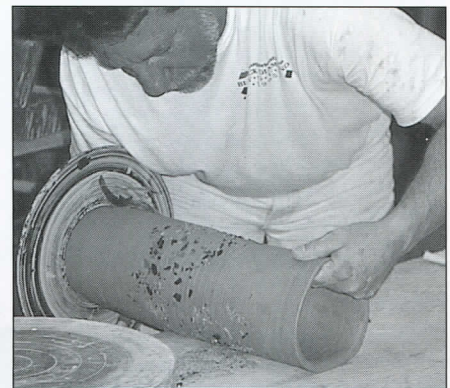
Step 7

Holding the bat almost as a steering wheel and supporting the cylinder from the inside, roll the cylinder in the glass. This is where a rigid bat and stiff clay is critical.



Step 8

Place the cylinder upright and paddle the glass into the clay still supporting the clay from the inside to maintain the integrity of the cylinder.



Step 9

Each time the clay is rolled onto the glass, it is to enhance the pattern and the coverage on the vessel's surface. Repeat this process until the surface is as you want it.

Step 10

The more you roll the cylinder, the more it will become stretched and distorted. Work carefully to minimize the distortion.



Step 11

To combat distortion, gently return the cylinder to its vertical form by grasping the cylinder around the outside, pushing it and pulling it back into shape.

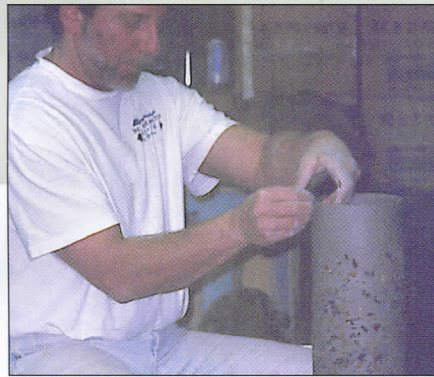


RE-CENTERING THE CYLINDER



Step 12

In preparation for continuing the throwing process, collar in the top of the cylinder.



Step 13

Throw the top of the cylinder slightly to re-orient and re-center it.

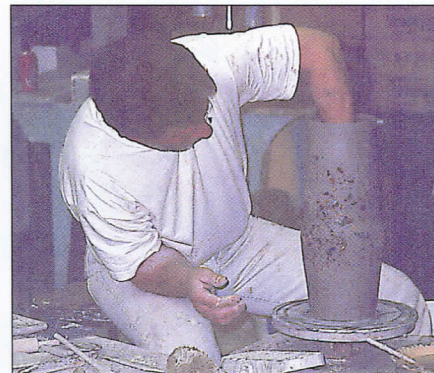
CAUTION: Before you continue, clean your wheel and workspace of all slip, trimmings, and other clay that you will want to recycle. Pieces of glass commonly fall off the form during the expanding step. Return the bat to the wheel and align the pinholes to their original orientation.

EXPANDING THE SHAPE FROM INSIDE



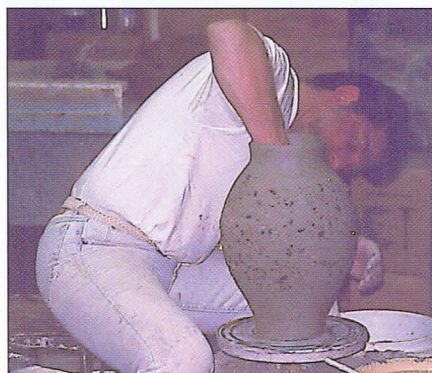
Step 14

If you've never done any one-handed throwing, this next step will take some practice to arrive at a comfortable personal approach. The more centered (meaning evenly thrown walls) the cylinder is, the more success you will have in one-handed throwing.



Step 15

I use my left hand inside the form to raise the clay and push it into the shape that I want. Yes, even with only one hand you can still dig into the clay and raise it! Hold and control your left hand and fingers just as you would if you had your right hand also working on the outside. A slow, careful approach works best. I alternate between using my hand and using a rib to expand the shape. Curiously, although I use my left hand inside the pot for throwing, I am more comfortable and have more control using the rib in my right hand.



Step 16

When you use a rib, be careful to hold it as flat as possible (not at a 90-degree angle) against the inside wall so you don't scrape clay away. The idea is to push the clay outward, not to scrape clay away and unnecessarily thinning the wall. As you expand the wall and it gets thinner, you'll feel the texture of the glass. It will take practice and experience to learn how much you can expand the vessel before you stretch it too much!

Recipes

Basic White Crackle

Cone 08

Gerstley Borate	.65%
Tennessee Ball Clay	.5
Nepheline Syenite	.15
Flint	.5
Tin Oxide	.10
	100%

Rogers White (clear)

Cone 08

Gerstley Borate	.60%
Spodumene	.35
Tenn Ball Clay	.5
	100%

Del Favero Luster

Cone 08

Gerstley Borate	.80%
Cornwall Stone	.20
	100%

Add: Copper Carb .2%

Yellow

Cone 08

Gerstley Borate	.80%
Cornwall Stone	.20
	100%

Add: Vanadium Stain .6%
The depth of yellow will vary depending on the stain that you use. Add up to 5% tin oxide for a more opaque quality.

Note: All glazes have been tested and work successfully with a 1-1 substitution of Murrays borate (plus 5% bentonite) for Gerstley borate. Other Gerstley borate substitutes may work equally well.

Steven Brantman is the founder and director of The Potters Shop and School in Needham, Massachusetts, a workspace, school, gallery, bookstore, and his studio. Steven also teaches pottery at Thayer Academy in Braintree, Massachusetts, and leads workshops on his wet clay and raku technique throughout the country. He is the author of Raku: A Practical Approach, now in its second edition and The Potters Professional Handbook, as well as many articles on pottery and ceramics.

FINISHING THE FORM



Step 17

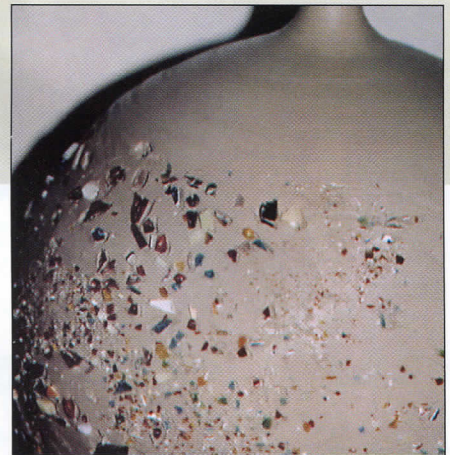
With the body of the piece finished, you must move to the neck and rim. Throw these sections in the conventional way with left hand in the inside, right hand on the outside. I continue to throw dry, but at this point you can use water if you are careful to restrict the water to only the surface of the clay that you are shaping.

WARNING! Keep that outside hand off the glass!



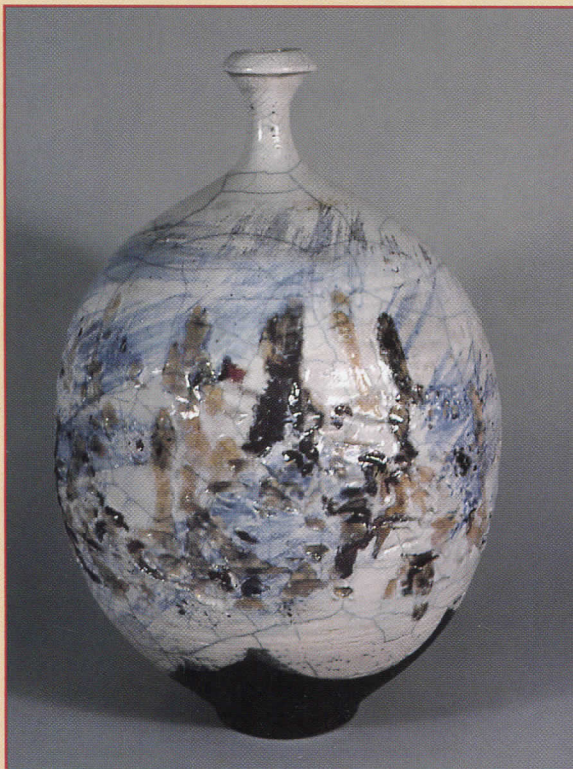
Step 18

All of my work has a trimmed foot ring that I complete when the clay is leather hard. Finish your piece according to your own style. Here, my bottle form is inverted in a chuck made immediately before use. The chuck is shaped to fit the form. While you want the chuck to stick slightly to the pot, you don't want it to stick too much (again, only practice and experience will tell), so before placing the vessel in the chuck, dry the rim of the chuck lightly with a towel.



Step 19

The surface of the finished vessel reveals how expanding the form from the inside out imparts a unique character to the surface of the vessel. The areas around the larger pieces of glass have stretched and redefined themselves and the placement of the glass in the clay moves into dynamic patterns.



Vessel, 16 inches high, Basic White Crackle glaze with brushes of Del Favero Luster. Slight post-firing reduction. Glass by itself melts only minimally at bisque temperatures but melts more the higher you fire. In addition, glaze acts as a flux, melting the glass further. My work is raku fired, but imbedding glass is not a technique tied to raku. If raku doesn't interest you, experiment with different firing styles, glazes, and firing temperatures.

THE FINISHED PIECES



Vessel, 20 inches high. Imbedded glass technique glazed with Rogers White with brushes of Del Favero Luster. Slight post-firing reduction. There are no restrictions on glazing methods and application can be by pouring, dipping, brushing, or spraying. Most of my glazes are brushed on with inexpensive wood-handled Chinese bristle paint brushes (2 to 3 inches wide), available at any home center or paint store. The bristles are soft, they hold a reasonable amount of glaze, and it is comfortable to use as a tool.