



THE TOP LAYER WORKING WITH RESINATE LUSTERS

by Johanna DeMaine

Fifteen years ago, while doing research for my MFA, I discovered the work of the Austrian artist, Gustav Klimt. I was inspired by his use of pattern and embellishments to raise his work to a higher level and I realized that I could also do the same using precious materials and techniques. It was at this point that I knew that I needed to come out of my comfort zone and learn new techniques to translate this preciousness.

The history of overglaze is inextricably linked to the development of decoration on a ceramic surface and the discovery of porcelain so I decided to work *over* the fired glaze surface. As a ceramist, I felt that it was important to not treat this surface just as a specialized China/porcelain painting exercise but rather see the overglaze process as *just another layer* in my ceramic toolbox. I also set myself the parameters of using water-based mediums as much as possible as well as using one common firing temperature so that all types of overglaze (lustres, enamels, China paints, texture pastes, decals) could be fired concurrently. The China/porcelain painting method is to have diminishing firing temperatures for each subsequent layer of overglaze used (for example: fire the first layer to 1472°F (800°C), the second layer to 1454°F (790°C), and the third layer to 1436° (780°C).

As there are many different types and methods of using overglaze, I set myself the task of learning a new technique fully before adding yet another to my toolbox. As my initial spur was preciousness, I decided to commence with resinate luster. Resinate luster is industry's answer to replicating the very elusive luster surface in a controlled manner. (For a fuller technical understanding of luster, refer to my Techno File article in the January 2013 issue of *Ceramics Monthly*, pp. 12–14.)

As luster contains many different solvents and other toxic components in their unfired state, I decided to work in a manner

whereby I limited my exposure to the luster but achieve extremely complex detail. I do this by using resist. I spend 90% of my working time applying the inert resist and only 10% applying the luster while utilizing the necessary personal ventilation, namely a respirator with an organic particulate filter.

Prepping the Surface

Choose a ceramic piece with a glazed surface. Colored glazes and different surfaces affect the fired result as luster takes on the characteristics of the surface under it—luster applied to a glossy surface remains glossy while luster applied to a matte surface remains matte. Clean the glazed surface with a mixture of hot water and a little detergent to remove dust and grease as these resist luster. Run the piece under hot water and dry it with a lint-free cloth. An alternative way to clean the surface is use methylated spirit (denatured alcohol) and a lint-free cloth. Do not touch the surface to be lustered with your fingers as they leave a greasy/oily residue on the surface.

For this project, I am decorating the surface of a stoneware plate. When just starting out your experiments with luster, it's helpful to work on objects with a flat surface until you are comfortable with the technique. Using a $\frac{3}{8}$ -inch, flat shader brush (*figure 1*), apply a very thin coat of mother-of-pearl luster to the plate. By dipping the brush into the luster then wiping it on the edge of the bottle before coating the surface, you will achieve a very thin layer. If the layer is too thick, it powders off in the firing and leaves bare patches. Try not to overlap dry strokes of luster as this will pull off the layer already there, as well as cause different intensities of color. Fire the dry plate to 1490°F (810°C) or the temperature suitable for your glaze type. **Note:** Luster has a firing range of 1112°F (600°C)–1490°F (810°C). The temperature you



1 On a plate fired with one coat of Mother of Pearl, use a marker to draw a design.



2 Outline the drawing with black luster resist applied using a tjanting (a wax-resist applicator for batik).



3 Apply different colored lusters to the design within the resist-applied lines.



4 Fire the plate and then remove the resist using a non-abrasive cream cleanser or methylated spirits.

fire to depends on the type of glaze underneath the luster as the glaze needs to soften slightly for the two to form a good bond.

Sketch a scene with a water-based marker onto the clean, mother-of-pearl-coated plate (figure 2). Draw over this with black luster resist using a *tjanting* (see figure 10). A *tjanting* is a Javanese tool for applying hot wax in the traditional batik process. I use it to apply a water-based resist rather than wax. Wax doesn't resist oil-based mediums very well and causes a real mess in the firing process as it mixes with the luster during the melt. The water-based resist withstands several firings without

having to be reapplied. I adjust the viscosity of the resist with a drop of Floetrol and acrylic gloss medium until it flows to my needs. Apply resist to any details in the design that you want to remain white in the finished image.

Layering Lusters

Apply thin coats of luster to areas in between the resists. I applied purple/violet luster for the mountains, yellow luster for the fields, and light blue luster for the water (figure 3). I'm leaving the sky uncoated. The applied resist stops the lusters from



Apply resist to all outlines as before, except the water area. Apply another layer of luster in that area.



Fire the plate again but leave the resist on this time, so it will continue to protect the outlines in the next step.



Apply resist patterns to the mountains and fields, then apply gold and cinnamon lusters, and use a gold pen on water areas.



Fire the plate for the third time and then remove the resist to see the final design.

bleeding into each other as well as providing white outlines (figure 4). Fire to your chosen temperature. **Note:** It's important to fire between each layer of luster.

Clean the plate with a non-abrasive cream cleanser to remove the resist. I use the brand name Jif, but if this isn't available, use methylated spirits (denatured alcohol) on a tissue or dust-free cloth to remove the resist. Don't use scouring cleansers as they will scratch the luster.

Re-apply the resist as before, but this time leave out the detailed water area. Reapply thin coats of luster to areas in be-

tween the resists: purple/violet luster for the mountains, yellow luster for the fields, and light blue luster for the water (figure 5). Fire to your chosen temperature (figure 6). Don't remove the resist after this firing.

Apply a layer of resist patterning over the mountains and fields. Then apply a thin coat of 12% liquid bright gold luster over mountains and a coat of cinnamon luster over the fields. Put a drop of gold luster in the gold pen, which is used for drawing fine lines (see figure 1) and pen-work the water area to add detail (figure 7). Fire the stoneware plate to 1490°F (810°C).



9 Test tile showing the fired results of lusters alone and in layers.



10 From left to right: 3/8-inch and 1/2-inch squirrel-hair flat shaders, tjanting, and gold pen for drawing fine lines.

DEFINITIONS

Luster: Extremely thin films of metals fired onto the surface of wares. The effect is due to the interference of incident and reflected light. Precious metal preparations and resin-ate lusters, in their unfired state, are complex mixtures of forty components with different chemical and toxicological properties. Their toxic and ecological effects vary from product to product.

Overglaze: Refers to all techniques utilized on top of a vitrified glaze surface, including the additive techniques of Persian or reduced lusters, resin-ate lustres, gilding, and other precious metals, overglaze colors and enamels, decals, added texture (pastes, fiberglass, and glass beads) low-fired glazes, as well as the subtractive techniques of etching and sandblasting.

Water-based mediums: Made with any water-based binder including glue, gum, glycerine, sugar water, acrylic medium.

Oil-based mediums: A medium based on oils such as mineral oil, castor oil, copaiba oil, turpentine, or essential oils.

Note: When lusters are fired onto stoneware or porcelain with high-temperature glazes, the temperature required to form a good bond between the two is at the higher end of the range. I choose 1490°F for my stoneware and porcelain work because it also allows me to fire any raised enamel decoration at the same time.

Remove the resist again on the entire plate (figure 8). The surface decoration on the plate is now complete in a total of four firings.

Making a Luster Chart

When applied, all lusters appear a treacly brown but achieve their color in the firing process. So that I can visualize what I am doing while working, I have made permanent color charts for each glaze that I use. This is simply a test tile that is labelled with various luster brush strokes, fired, and then the brush strokes are repeated on the same tile turned 90° and fired again. This provides me with a read-out of one and two luster layers plus many variations of colors when one luster is applied over another (figure 9).

Brush Care

Keep luster brushes and tools only for luster (figure 10). Other mediums will contaminate the brushes. Clean the brushes using a series of three jars: half fill two small glass jars with luster essence (I prefer citrus solvent) and one jar with methylated spirits. **Note:** It is important to use glass here as some solvents and luster essences can dissolve plastic and polystyrene. Swish your brush in the first jar, blot it on a tissue then swish it in the second jar, blot it again and then swish it in the methylated spirits and blot. Finally, work detergent into the bristles then rinse them exceedingly well under warm running water. Blot the brush on a tissue and dry it flat.

Health and Safety

I take health and safety very seriously when working with lusters. My website (<http://overglaze.info>) has important information on the subject, including the article, “Health and Safety and Overglaze,” from the *Journal of Australian Ceramics*, Volume 45/3, pp. 91–94.

Johanna DeMaine started potting in 1971, established DeMaine Pottery Studio Gallery in partnership with her husband in 1975, and has participated in numerous exhibitions. Her work is represented in public art galleries, museums, and government collections and has been presented to HRH Queen Elizabeth II of England, the Governor General of Australia, and Crown Prince Frederick and Princess Mary of Denmark. Since 1981, DeMaine Pottery Studio has been located at Landsborough, in the hinterland of the Sunshine Coast, Qld, Australia.