

G R I S A I L L E S A M P L E R

Photos and Instructions by Bill Helwig

This set of instructions is designed as an easy to follow guide to aid the enamelist, student or hobbyist to understand the workmanship necessary to create an object enameled in a style known as *grisaille*.

I will not go into historical background or technological details related to enamels or enameling. Nor, will I dwell on design or art theories and philosophies. Although it is obvious from the example used as well as its subject matter that there is a strong personal identification of the author and creator with design and philosophical intent. I felt no need to compromise a work of art in the face of educational comfort.

The specific object was created from a shallow copper tray 6" in diameter, 1/2" deep. The copper was 0.0432" thick. The type of copper used was "oxygen free, high conductivity" copper, conforming to ASTM specifications B-170.

The copper was annealed to remove dirt and grease from the surface.

The annealing process was carried out by putting the copper form on a firing mesh and placing it in a preheated furnace for two (2) minutes at 1440°F. Upon removal from the furnace, it was quenched in water and cleaned in pickle, 1 part nitric acid and 1 part water (room temperature) until all copper oxide was removed. The copper form was then rinsed under hot water, replaced in the pickle for several seconds then rinsed in hot water, cold water and blotted dry with absorbent toweling.

The concaved surface was sifted with 80 mesh black enamel (1996) through a 60 mesh sifter. (A holding agent may be used if felt necessary.) The enamel covering was even and about .020" thick before firing.

The copper form covered with enamel was placed on a firing mesh concaved side up, which was then set into the center of the furnace and fired at 1500°F. for two (2) minutes.

The firing mesh was removed from the furnace, the enameled form taken off and placed on a steel top table to air cool.

After it was cool to the touch, it was pickled to remove the copper oxide scale from the convex surface, the previous method of cleaning was again used.

The convex side of the copper form was then sifted in the same manner as the concaved side, placed on a three leg firing stilt supported by the outside edge with the convex side up and fired the same as

previously stated.

The stilt was removed from the furnace, the enameled form taken off the stilt, and placed on a clean steel table top to air cool.

After the object was cool to touch, the edges were filed to remove copper scale and to true the enamel to the external form and surface. The object was then washed with soap and water and blotted dry (FIGURE 1.).

FIGURE 2. A thin even coat of a holding agent was brushed on the surface. (1 part klyr-fire to 1 part water was used), and sifted with 150 mesh white enamel (1040) through a 100 mesh screen and dried under heat lamps. The coat of enamel was thin and even. The enamel grains were laying side by side rather than being stacked.

FIGURE 3. The design or cartoon was scratched through (sgraffito) the unfired white enamel to the black enamel surface with a metal pointed stylus. The loose grains of enamel were frequently blown away during the drawing to insure clarity. NOTE: the initial cartoon always appears somewhat crude.

FIGURE 4. All areas which are to be black in the finished object, have had the white enamel removed. Additional toning of the design is achieved by brushing the surface in specific areas with a small brush. NOTE: misdrawn lines are left to be corrected during the painting process.

The design was arrived at spontaneously without the aid of a pre-sketch or templates or stencils, although such could be used. If the cartoon is correct enough for your idea it is then fired. If your design is not clear, then it should be washed off and the process started again. After it is fired, you are committed to the now established design.

FIGURE 5. The object is fired on a three leg stilt with the concaved side down until the design glosses, (1440°F. for approximately one (1) minute).

The same filing of the edges and washing procedure is followed after each firing.

The white enamel for painting 325 mesh (1040) (325 mesh 1030 painting white is listed as 913E mixing white in Thompson catalog) is soaked in water and klyr-fire; the enamel is not mixed to avoid air bubbles. The proportions are determined by individual preference. The painting media is also a matter of preference. When using oil, the enamel and oil is mixed with a spatula using blending tech-