



San Gemini Preservation Studies
International Institute for Restoration and Preservation Studies
203 Seventh Ave Brooklyn, NY 11215, USA

Archaeological Ceramics Restoration Project, San Gemini, Italy 2012
Course: SG203B - Introduction to Conservation of Archaeological Ceramics – Part 2, Workshop

Instructors:
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FINAL CONSERVATION REPORT

Reference data and description

Inventory Number: 373824

Object: Fritillus

Date of Production: 1 d.C.

Provenance: Bevagna

Size: Total Length is 12.5cm

Diameter of Rim is 5.6cm

Diameter of Neck is 2.4cm

Diameter of Body (at maximum width) is about 6cm

Description: All the pieces are made from a fine reddish-orange earthenware clay. The technique used to create this object was wheel thrown in a pear-shaped shape. On the lower third of the object there are four equally spaced holes around the base, that were possibly made from a stand that the object was placed on while it dried or was fired.

Condition report

Item was fractured into seven pieces. 6 pieces belonging to the rim and the one body piece. Body piece was complete with foot and the beginning of the neck. Body piece is also covered with many hairline fissures. There was no previous restoration. All of the pieces were covered with soil encrustations and some abrasions.

Restoration

1. Documentation

For the documentation of the object we did three different methods; photographic, graphic, and a written report. For the photographic we took photos of our fragments on a black background with a digital camera. We took pictures of both the bottom and top views of the pieces to show what they looked like before cleaning. As well as, while we worked on the objects we took pictures throughout the process of cleaning, bonding, and filling, to show the steps that the item took to get to its finished form. For the graphic documentation, we printed off two pictures, one from the top view and one from the bottom, and using a piece of transparent paper over top we drew the outlines of the fragments, as well as and other breaks, fissures, manufacturing defects, and the outline of the soil encrustations. For the written report we filled out a Conservation Record For Ceramic Materials Report. For this report we filled out Reference Data, Description of the object, a Condition Report, and the Restoration information. Each day we took notes on what we did on our objects; how we cleaned the objects, what we used for bonding and filling; these notes were useful to fill out the Conservation Report and the Final Report.

2. Cleaning (which method you used, its characteristics, how and why)

The majority of the cleaning of the item was done with a mechanical method of a scalpel and a chemical method of water with a cotton swab. This was done as there was a greater control over what was removed from the fragments. The only

disadvantage I found with this was the cleaning of some encrustations that were too hard to be removed by the scalpel, even after using water on them. The answer we used for these encrustations was to use another type of chemical cleaning by using a cationic high-ion exchange resin on them to soften them up and remove them with a cotton swab or the scalpel. With this high-ion exchange resin I had to be careful to rinse it well to not leave any harmful material on the surface of the ceramics. This resin worked very well on the spots that it was used on, except for a little area of black encrustations (of some material) on the body piece near the shoulder of the item.

3. Bonding

On two very tiny fragments on the surface of the body piece, I used a solution of polyvinil butirral resin (Mowital B60 HH) in ethanol to readhesion them as to not lose them and destroy part of the surface of the piece. This was done during the cleaning process. After the cleaning process was completed, I consolidated all of the fragments in a solution of acrylic resin (Paraloid B72) 2.5% w/v with acetone. This was to make sure that the ceramics were bound together and to make them more stable, this was especially true for the main body sherd as it is covered with many hairline fissures. After the consolidation, I used a small amount of acetone and a cotton swab to remove, very lightly, some of the consolidation that had gone glossy as well as having to readhesion the two tiny fragments again, this time with a solution of Paraloid B72 10% w/v with acetone. Then, along all the fractures that joined with another piece, I placed a priming layer, consisting of two layers of Mowital B60 HH 2% ethanol w/v and two to three layers of Mowital B60 HH 5% ethanol w/v, to get ready for joining the pieces together. To join the rim pieces together, I used one layer of Paraloid B72 20% w/v in acetone and then taped the pieces together to make sure they stayed together and in place. The Paraloid was used as the final layer, as it is in acetone and therefore dries faster, because the acetone evaporates quicker the ethanol. For attaching the rim to the body, there was a bit more difficulty. There were only four connecting points between the two pieces and all of them were very tentative. To make sure that they were joined together properly, pieces of tape were used to mark where the joins were, as well as we created a support out of polystyrene foam to hold the base in a vertical position. Then I placed one drop of Paraloid B72 20% in acetone, at each point and held the two pieces together, making sure that it was in the right position and I stayed like that for a couple of minutes to make sure they were stuck together. After the Paraloid had dried a little more, I used a probe to place a drop of Mowital B60 HH 20% ethanol w/v on each of the inside joins to help reinforce the connections. After this was done, and the Mowital had dried, I used pieces of tape along the outside of the neck, wherever there was a opening to get ready for the fillings.

4. Filling

For the fillings we are all using a plaster in resin (Pollyfilla Interior). This type of plaster is easier to work with in a stucco application, and for my object this is the best way to apply the filler. The first day with each got 20g of the Pollyfilla and then we had to use some natural pigments (earths) to bring the color of the plaster as close as we could to the natural color of the original, but making sure that the color was still lighter as we are going to be adding a protective coating to the integrations which will make them darker. For choosing the color we want to make sure that with color we pick is similar to the original, but not identical as we still want the integrations to be noticeable, not just at first glance. The color I chose had a combination of burnt sienna and burnt umber (in equal portions) as well as a little bit of raw sienna. As for applying the fillings, after we had the final color and the dry plaster, we added a little bit of the dry plaster into a bowl and then slowly added some distilled water to create a creamy, sticky mixture. Then, by using a small spatula, slowly started to add the filling into one of the holes, first starting with the edges and then working towards the middle, making sure to press firmly, without creating air bubbles. As the places where I need to join are very small and in the neck of the object, we didn't use a mold with the dental wax, as the breaks go in many directions and trying to add it in that area would be difficult. Instead we used tape on the outside to stop the plaster from going through as we added it on the inside. After it had dried we took the tape off and then worked the plaster on the outside before adding another layer of plaster on the outside to give it a smoother finish. After all of the plaster has dried we are going to work the plaster, with a scalpel or sandpaper, to smooth the plaster to a finish very similar to the original. Then we will place a protective coating of Paraloid B72 2.5% w/v in acetone by brush on the plaster to make sure it doesn't crack, break, or chip.

5. Other notes

During the cleaning process, found evidence of gypsum or limestone in the fabric of the fragments, as well as some high quantities of iron, as viewed as large spots of red in the fabric of two rim pieces.

Photo (before top view)



Photo (before bottom view)



Photo (during cleaning)



Photo (during joining)



Photo (during joining)



Photo (after)

