



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:  
Prof. Elena Raimondi (Project Conservator / Restorer)  
Prof. Elena Lorenzetti (Archaeologist)

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## FINAL CONSERVATION REPORT

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| <b>Reference data and description</b>   |
| Inventory number 373822. Object is a large red/orange amphora dating to 1 d.c. Only the neck is present. This object was wheel spun and common pottery. The surface is very porous. The measurements are 25cmx9cmx20.5cm (LxWxH). This object comes from Perugia, from the excavation in Bevagna 79 Struttura 7. This object has been held by the state in an indoor storage facility in Perugia.   |
| <b>Condition report</b>   |
| When we received our object, we only had 10 pieces from the original amphora. All these pieces connected very well, except one sherd, which was at the bottom of our amphora neck. We had the complete rim and complete handles, along with the majority of the neck. Our sherds did not complete the shoulder or any of the body. All of our sherds were coated in soil encrustations. There was a ring of tape residue surrounding the neck approximately 6cm down from the rim.  |
| <b>Restoration</b>  |
| <i>1. Documentation</i>   |
| Photographic documentation: I began the documentation by laying out all the sherds to examine how they fit together. I then photographed them, first appearing as similar to the original product as possible, the reversing all the sherds to have a clear view on as much of the object as possible. I took photographs in the middle of my cleaning process, and again after I glued all the sherds together. My final photographs will be taken when I have completed the restoration process.<br><br>Graphic documentation: I then received two printed copies of two different photographs of the sherds. I proceeded to tape a transparency over the top and trace all our sherds along with the mechanical damage previously done to the object, chips, and whatever else I could see on the surface.<br><br>Written documentation: Every day, after I all finished all my work, I recorded everything I had done that day as a personal journal to keep a detailed record of each step. As I completed each step of the restoration process I recorded my findings on the official documentation- Conservation Record for Ceramic Materials. |
| <i>2. Cleaning (which method you used, its characteristics, how and why)</i>  |

My next step was to begin to clean the sherds. On the sherd I began with, I took a piece of tape, pressed it against my jeans to remove some of the stickiness, and laid it down the middle of a small rim sherd. The purpose of this was to contrast two possible cleaning techniques. On the left half I began using the number 15 scalpel blade, using the weight of the scalpel while not pushing, running the blade parallel to the surface, to remove as much of the soil encrustation and as little of the clay surface as possible. On the right, the same technique of running a cotton swab dipped in deionized water running it parallel to the surface was used. With this method I had to continuously turn and rotate my swab, frequently changing it so I wouldn't start removing the clay surface instead of the soil encrustations. Between my professor, Elena, and I we determined that using the scalpel was the best method for cleaning my pot because water dissolved part of the soft clay body.

I split my sherds with my partner Christina, each of us in charge of cleaning half of the pieces of the amphora. I finished my small sherds, but to keep the cleaning looking even between my sherds and hers, we had to go over our sherds with Ethanol so everything has the same finished look. I continued cleaning my sherds, which was very soil encrusted, and had a very soft surface with my scalpel until the end of class. Elena then determined the Ethanol was ineffective so we stopped using that technique after a sherd or two.

Christina and I were instructed to clean the exterior only of the surfaces in the interest of time while paying special attention to the places where the sherds reattached and taking extra time cleaning along the edges. I tried to use a solution of Ethanol and water to clean the harder encrustations but since the clay is so soft, Elena told me not to use any type of liquid anymore-stick to scalpels only. I then finished the exterior of my sherds.

### *3. Bonding*

I began to work on the bonding process of the Amphora by dipping the smaller pieces in the consolidator solution of acrylic resin (Paraloid B72) 2.3% w/v in Acetone and painting the same consolidator onto the surfaces of our larger pieces. After that dried and all the surfaces looked the same, I brushed a polyvinyl butirral resin (Mowital B60HH) 3% in Ethanol along all the cracks where the sherds would be joined by glue eventually until the cracks were all glossy. This solution was not so effective, so I began to use the 5% Mowital which after a few coatings worked effectively.

The next day I began by applying one final layer of the 5% Mowital on the surfaces of the fissures that were going to be glued together. After it dried, Christina and I tapped all our sherds together to get an idea of the final shape and order in which we would need to glue them. From there, we took all the tape off and began gluing sherd by sherd with 20% Mowital in ethanol until all of our sherds were glued and taped together except the handles. We decided this because the weight of the handles would cause more problems and make the restoration process nearly impossible to achieve.

When we took all the tape off the next day, Christina and I discovered that the bottom sherd had not taken the glue and it did not stick to the rest of the neck. Christina and I then glued the final sherd back using the 20% Mowital and taping the sherd to the rest of the neck to secure it as tightly as possible. We then left it overnight to let the Mowital harden and set.

### *4. Filling*

I measured out 20g of a plaster stucco with cellulose resin (Polyfilla Interior) to start mixing with color pigments in order to try and obtain a color that would match our object that we could use to fill all our holes in with. I used a mixture of most mostly Burnt Sienna with less Raw Sienna, Raw Umber, and Brick Dust with a tiny amount of Yellow Ochre added in. The Brick Dust gave me the kick I needed to reach the more orange color of the amphora. I then took about half of the powder in the bag and mixed it with about 5mL of water to turn it into a paste. I then took a small cap and started pushing the plaster into the cap, going around the edge to completely destroy any air bubbles adding layer upon layer until the cap was full and I had finished my sample which was then set to dry overnight to see if the color would be suitable to use for the filling.

The next day I took my plaster samples and used sandpaper (180, 280, 320, 500) to smooth the surface as much as possible. From there, I painted a quarter of the sample with Paraloid 2.5% in acetone. When both Christina and my sample had dried, we discovered that my sample was a little bit too dark and Christina's was a little too light, so to fix our problem we combined our two bags of plaster. We then found a piece of wax that would cover our whole loss and taped it as tightly as possible to the interior of the neck, covering the whole loss, forming it to the shape of the rest of the neck. We began to fill in the large loss slowly by pushing the plaster into the cracks then slowly building up and adding to it with more and more until the plaster was above the surface all the way around and pushed as far as we could down.

We then made another batch of our plaster (mixing the dust with water) and filled the other smaller loss, then the cracks across the neck. After we finished filling in what we could, we started smoothing the surface, only where the plaster had already dried, with a clay scraper.

The next day, the plaster had completely dried and we began by using the clay scraper to smooth out all the edges while using the sandpaper to create a more even surface on our larger loss along with maintaining the shape and form of the neck. After the mechanical smoothing of the fillings we protected them with Paraloid B72 2.5% w/v in acetone.

#### 5. Other notes

We began our conservation on the first of June and will finish by the 15th of June.

Photo (before)



Photo (before)



Photo (during)



Photo (during)



Photo (after)



Photo (after)

