

POMPEII SUSTAINABLE PRESERVATION PROJECT (2023)

Conservation of Circular Tomb PXXIV 13 in the Necropolis of Porta Nocera, Pompeii



Image showing the Tomb PXXIV 13 and highlighting the area worked on

Conservation Issues/ Glossary: Delamination, Detachment, Blistering, Cracks, Decohesion, Bio-deterioration, previous interventions such as edging repairs which were no longer stable.

Treatment Performed: Prior to initiating any intervention, discussions were held and compatible materials were identified through testing various ingredients and proportions, which proved to be essential. The tests were devised to determine the suitable consolidant, grout, and fillings for edge repairs, with the following outcomes:

- **Consolidant:** Following penetration and strength assessments, Calosil E 50 emerged as the optimal choice.
- **Fillers for edge repairs:** Intonaco edging, comprising a 1:3 ratio of slaked lime to aggregates, was selected. The aggregates consist of a mixture of coarse and fine yellow river sand particles, along with pozzolana.
- **Grout:** After evaluating the flow, injectability, and shrinkage of grouts formulated from various ingredient proportions, the recipe developed by conservator-restorer and supervisor Leo Borgatta was deemed suitable. This formulation incorporates fillers such as inert quartz powder, and Roman pozzolana; Calxnova “KalkBindemittel” as binder; and water as the dispersing medium.



Preparation of the conservation tests

The practical conservation performed has been discussed as follows:

1. Decohesion of plaster surface

This was addressed using consolidant - Calosil E 50.

2. Delamination of Plaster Layers between Intonaco and Arriccio:

2.1 Grouting in hollow layers of plaster

- Prior to grouting, attention was given to facing, using Japanese tissue as a protective layer since the outer plaster/intonaco was weak and fragile. This was applied using Carboxymethyl cellulose. This not only provided additional support but also ensured careful execution during the grouting process.
- Subsequently, grouting was done using a formula crafted by Leo Borgatta, which had proven to be effective during treatment procedure trials. This involved incorporating quartz powder, microspheres, pozzolan, Calxnova, and water into the mixture.



Loss of fragile plaster layer seen in the form of hole which is also completely hollow from inside



Facing was done first to secure the fragile plaster layer



After grouting



After conservation - The plaster layer has now been secured and facing removed carefully



Working shots of during conservation efforts: Applying facing layer (left), Grouting (right)

2.2 Edging repairs for layers of plaster:

The fillings for edging repairs in the finer (intonaco) plaster layer were prepared in a ratio of 1-part slaked lime to 3 parts sand (as discussed above), with the incorporation of yellow pozzolana (pozzolana gialla).



Images depicting the executed edging repairs

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