

Forme cristalline del gesso nei dipinti murali

Different crystal shapes of gypsum in the wall paintings

Paola Santopadre, Pierluigi Bianchetti

The wall paintings of the Africa room in Doria Pamphilj building (Valmontone, near Rome), those of the staircase of the castle of Julius II (Ostia antica) and those of the nymphaeum in Sacchetti building (Rome) have been studied by the Istituto Superiore per la Conservazione ed il Restauro (ISCR) of Rome between 1997 and 2005. The painted surfaces of these works are totally different from each other but all located in buildings where neglect, abandonment and misuse had dragged on for years. They showed very similar forms of degradation characterized by extensive blistering and flaking. In this paper, thin and cross sections of the paintings stored in ISCR are re-examined by a polarizing microscope. In this way it was possible

to describe the nature and role of the gypsum located in the thickness of the paint layers where it has partially or almost completely replaced the original binder and filled the plaster pores.

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Bianco-Arancio di Carla Accardi: l'intervento di restauro e lo studio sul comportamento meccanico dell'acetato di cellulosa

Conserving "Bianco-Arancio" by Carla Accardi and investigating the mechanical behaviour of cellulose acetate

Grazia De Cesare, Paola Iazurlo, Carlo Serino, Giancarlo Sidoti, Mauro Torre

The conservation of the work entitled "Bianco-Arancio" by Carla Accardi (1967, Civic Museum of Gibellina, Trapani, Sicily) was carried out by the Istituto Superiore per la Conservazione ed il Restauro (ISCR), department of contemporary art materials. Painted in fluorescent hues, the work is made up of six intertwined bands of cellulose acetate – a typical feature of the artist's activity at that time.

Among the first plastic materials of semisynthetic origin, cellulose acetate poses serious problems of conservation because of its high sensitivity to thermo-hygrometric variations and a spontaneous tendency to release of acetic acid. With the passage of time, the material loses much of its elasticity due to deterioration of the polymer chain followed by the release of internal plasticizers which cause the material to become stiff and brittle. In the case of "Bianco-Arancio", there were cuts and scratches especially near the edges of the frame, together with visible deformation due to the fact that the bands were attached to the frame only on the short sides, causing the paint film to flake away.

Before starting the conservation of Carla Accardi's work, it was important to study in depth the behaviour of cellulose acetate. In particular, the following aspects were examined through distinct phases of humidification and dehumidification:

- measuring the deformation produced in free samples of cellulose acetate and the stress developed in stretched in samples, according to changes in relative humidity;
- devising a proper system for lining the edges;
- testing the effectiveness of stickers for head-to-head sutures and transparent reinforcements;
- measuring the load to be applied to cellulose acetate for proper tension on the frame.

All the above information was necessary and functional to carry out the various stages of conservation work on "Bianco-Arancio" such as repairing the support, consolidating the colours of the paint film, and remounting the bands on a more frame capable of providing constant tension..

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ABSTRACT

Le urne etrusche dipinte e dorate di Perugia: studio della tecnica pittorica e restauro

Examining and restoring painted and gilded Etruscan urns from Perugia

Fabio Aramini, Lucia Conti, Luciana Festa, Maria Concetta Laurenti, Paola Santopadre, Giancarlo Sidoti, Flavia Vischetti

The restoration of the Etruscan urns from the “Ipogeo dei Cacni” took place through active cooperation between Carabinieri Command Centre for the Protection of Cultural Heritage (CCTPC), and the Istituto Superiore per la Conservazione ed il Restauro (ISCR).

The workshop has been set up in 2013 at the CCTPC for the restoration of precious artefacts which have been illegally excavated and stolen, then recovered after lengthy investigations. The skilled work is carried out by ISCR restorers assisted by twenty-one students of the ISCR “Scuola di Alta Formazione” (Advanced Training School).

The urns are exceptional for several reasons: the archaeological site dates from between the third and first centuries BC; the historical and artistic significance of the urns; the execution techniques employed; and the remains of polychrome and gilded finishing, miraculously preserved on several pieces.

The urns, made of local travertine stone, come in a variety of types, covered by lids with reclining figures of the deceased (a Kline) or with gabled roof, and have figurative motifs sculpted in relief, or coated with plaster and painted. Typical forms of alteration and deterioration that can be seen today are surface honeycombing as well as cracks and missing areas.

On some of the urns, the thin layer of plaster coating with painted decoration appears incomplete and disjointed; on others, the decorative motifs can still be seen on the polychrome reliefs which have survived only as small isolated fragments. The painted layers are very fragmented and poorly adhering to the surface, and the same is true of the gilded areas.

Restoration work included cleaning operations to remove deposits and to consolidate the remains of plaster and painted films. The techniques and methods employed were compatible with the original constituent materials and aimed at enhancing the decorated and painted parts.

Prior to, and during, the restoration work, scientific tests and observations were carried out in order to examine the working techniques and the nature of the original constituent materials, thus expanding the amount of information available on this class of artefacts. Red and yellow ochre, red lacquer, cinnabar, Egyptian blue and vegetal black were identified. The pigments were applied on a preparatory layer of lime and spatic calcite or directly on stone surface.

The two major urns are decorated with pure gold leaf set on a preparatory layer of ochre.

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Da Balla alla ricerca sulle pitture a smalto

From Balla to Research on Enamel Paints

Grazia De Cesare, Paola Iazurlo, Giancarlo Sidoti

The proposed research was based on activities carried out by the conservation department for contemporary art materials of the Istituto Superiore per la Conservazione ed il Restauro (ISCR) at the Balla House in Rome, focusing on two artworks by Giacomo Balla: the paintings of the small room Studiolo rosso (1929) and the triptych *Le mani del Popolo Italiano* (1926).

In both cases paint layers are morphologically similar to industrial enamels, and one of them, dated 1926, is insoluble in most solvents, such as the behavior of the alkyd used during cleaning. nevertheless, chemical analysis was carried out by gas chromatography mass spectrometry, pyrolysis gas chromatography mass spectrometry and Fourier transform infrared spectroscopy; these tests excluded the presence of alkyd and also pyroxyline paint (cellulose nitrate), clearly identifying just drying oil, metal soaps and terpene resin.

The aim of the research was to better understand the composition of Balla's insoluble enamels, morphologically different from a simple oil paint layer, as the analysis suggested. The topic is strictly connected to the first commercialization in Italy of gloss paint produced in Italy, very experimentally during the 1920s, about which few details are known.

In order to achieve this aim, given the lack of similar materials in Balla's atelier, some formulae for the oleoresin paints were used to create an insoluble film. Several mock-up samples were prepared using oleoresin materials, drying pigments and a drier. These samples were analytically compared to the chemical results of Balla's enamel, in order to verify the original materials in an indirect way.

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