

Il progetto ICR di manutenzione e controllo della Galleria Doria Pamphilj: schedatura conservativa e monitoraggio ambientale
ICR project for maintenance and control of the Doria Pamphilj Gallery: computerisation of the tracking card system, and environmental monitoring

The paper illustrates the status of the project undertaken by ICR in 1997 with the aim of establishing guidelines for the optimal maintenance of museum collections and display items. The chosen field of application was the Doria Pamphilj Gallery in Rome. Two work groups were involved in the project and their activities are described in detail: a group of restorers and computer experts had the task of measuring the state of conservation of the works by devising a tracking card, together with glossaries and legends, for carrying out a thorough survey of the paintings (some on canvas, others on wood) and for the computerisation of the data. Many of the works in the collection were catalogued using this computer-based system and a group of scientific experts made up of a physicist, a chemist and a biologist gathered data and monitored several of the gallery's rooms, using two approaches. The first involved a survey of the general features of several rooms based on visual observations, while the second involved measuring the quality of the air and of the microclimate in the display rooms, by means of a series of scientific procedures for analysis and control.

Indagini non distruttive sul sottosuolo della casa dei Vettii di Pompei

Non-destructive survey of the subsoil beneath the casa dei Vettii in Pompeii

As part of ICR's ongoing programme of diagnostic activities in Pompeii, non-destructive geophysical surveys have been carried out in the Casa dei Vettii and in the neighbouring Casa VI 15,2. The programme took the form of micro-gravimetric surveying followed by a geo-radar survey. The combined results of the two surveys show that they provide useful information about the subsoil at different levels: at the deepest levels there are numerous cavities; at levels just below the surface, there are a series of anomalies, many of them manmade, in part consisting of channels and in part of structures. The wealth of data gathered was compared with the results of specific core-boring tests and with those of sample excavations, as well as with current ideas about the construction history of both houses. The outcome is that our knowledge has been improved regarding the various stages of construction and the subsequent division of the property between the two houses.

Applicazione dei diagrammi di flusso stratigrafici al restauro di manufatti artistici e archeologici

Application of stratigraphic flow diagrams in the restoration of artistic and archaeological objects

Following the example of archaeological practice in the UK, Italian archaeologists have begun to use stratigraphic flow diagrams to record anthropic stratigraphic data, as well as the interpretation of results and the publication of excavation data. By contrast, even when conservation practice requires the use of analysis procedures and stratigraphic excavation of variable scale contexts, the recording of the stratigraphic data for the manmade objects (and the surroundings associated with them) is still carried out using wholly empirical descriptive criteria. The paper explores the possibility of using flow diagrams prepared in a similar way, for the conservation field as well, especially in the context of a laboratory-controlled excavation for conservation purposes. With this aim in view, some significant changes need to be made in the way the diagrams are prepared, and it is also necessary to examine some of the theoretical aspects on which the diagrams themselves are based. The paper also describes the practical experience of a laboratory-controlled excavation during which some of the new ideas in this field were tested out.

ABSTRACT

Studio sull'impiego di gas non tossici nella disinfestazione di manufatti lignei e di materiale cartaceo

Study on the use of non-toxic gas in the disinfestation of wooden and paper objects

This paper deals with the disinfestation treatment of wooden and paper objects in a modified and controlled atmosphere with low oxygen levels, thus causing the death of the larva. During the study, tests were also carried out on the gas permeability of the wood, and observations were made of the variations in size that the wood might undergo as a result of treatment. The gas mixture, produced by a computer-controlled generator, substitutes the oxygen in the air with nitrogen and carbon dioxide, by pumping a mixture of these gases into the area where work is being carried out. For this experiment, the larvae of the Anobiidi were used for the wood and paper samples, and the larvae of *Hylotrupes bajulus* L. for the wood samples only. Our tests took place in an airtight chamber of 0.5 cubic metres. As for the treatment parameters, the tests were carried out at temperatures of 21 and 25 °C, with relative humidity of 60-65%, for periods of between seven and thirty days. The results show that complete disinfestation can be achieved with the wood and paper material used in this experiment, following the procedures described.

L'intervento di disinfestazione di manufatti cartacei con gas non tossici per l'Archivio di Stato di Massa

Disinfestation of paper items with non-toxic gas, on behalf of the State Archives in the town of Massa

This report illustrates the results of a disinfestation operation, based on the use of modified atmosphere, carried out for the Pontremoli Archive Section, a branch of the State Archives in the town of Massa. The paper items were infested by insects, identified as *Stegobium paniceum* after capturing specimens with entomological adhesive traps.

Analisi tecnologica dei materiali costitutivi di alcune tombe dipinte da Capua antica

Technological analysis of materials used in some of the painted tombs in Ancient Capua

The precarious state of conservation of the painted slabs from the Capua tombs, stored in the National Archaeological Museum in Naples, made it necessary to carry out close inspection of the painted surfaces to determine the degree of deterioration. This in turn led to a systematic study of the painted surfaces aimed at determining the type of conservation action required. Knowledge of the materials and the construction techniques used is clearly one of the crucial elements for deciding on an appropriate restoration procedure, in addition to analytical observation of the signs of working which have remained impressed on the painted surfaces, as well as the exact determination of the type of materials used and the techniques employed to produce them. This was achieved by analytical techniques of the archeometric type (diffractometric and spectrophotometric microscope analysis, etc.) which can be used on very small samples representing the specific situation under investigation. In the case of the painted tombs in Ancient Capua, it was also necessary to use thin-section petrographic analysis, combining it (whenever possible) with diffractometric analysis, with two aims in view – first, to detect the different stratification of the paintings; secondly, and most importantly, to find out their composition. In addition, microscope observation of the prepared slides made it possible to record several special features of the painted layers, and was useful for understanding more clearly the techniques used in producing the paintings.

L'intervento di restauro su *Maternità* di Pino Pascali

The restoration of Maternità by Pino Pascali

Maternità is amongst the works dating from 1964 that Pascali sent to the 'Rassegna' (exhibition) at Palazzo delle Esposizioni in Rome. During assembly, the piece was seriously damaged, to the extent that the artist displayed only one work – Bocca rossa (red mouth) – in the hall devoted to Neo-Dadaism and to Pop-Art – alongside works by Mambor, Previtiera and Lombardo. The piece was made up of canvas drapes supported by a balloon. After the accident, it was almost unrecognisable and Pascali disclaimed it. In fact, it was never taken away from the Palazzo delle Esposizioni even though the organisers normally insist that works be removed within one month of closure of an exhibition. It was evident that restoration would be especially problematical. There were only a few photos from publications of the period showing what the work originally looked like. Furthermore, in addition to the technical problems of reconstructing the materials, by now reduced to stiff canvas drapes, there was some doubt about the legitimacy of reconstructing the work, since it hardly seemed to be by Pascali at all, but rather an object inspired by a study of drapery, something completely outside the artist's oeuvre. A further question was whether to put the balloon back or not, as a support for the canvas. However, this doubt was resolved by the material itself. Gentle damping treatment of the material, held upside down, led to slow but sure softening of the painted canvas until it acquired its original shape of a pregnant belly, at which point it was natural to insert the balloon again. The shape of the belly depends not only on the position of the balloon (determined by the round hole in the rigid support panel) but also on the gentle pressure exerted on the canvas by the balloon as it is gradually inflated.

Controllo della vetrina del Reliquiario di Ugolino di Vieri nel Duomo di Orvieto

Control of the display case for the Reliquiario di Ugolino di Vieri in the Duomo at Orvieto

A project has been carried out in Orvieto cathedral to check the display case of the Reliquiario di Ugolino di Vieri. The project was funded by a contribution from the Superintendence of the Environmental, Architectural, Artistic and Historical Heritage of the Umbria Region. The following data were gathered: temperature and humidity readings inside and outside the display case and measurement of the airtight sealing of the display case by means of a tracer gas. The display case is sealed with silica gel and is equipped with a system (originally designed by the ICR) for re-circulating and purifying the air inside it. The results show that the display case is more than sufficiently airtight and that it is well-equipped to deal with the pronounced swings in relative humidity of the air on the outside.