

ABSTRACT

The beginning of this doctoral thesis is part of the research work developed in the restoration process carried out in the set of paintings of the Golden Gallery of the Ducal Palau of Gandia. It is a large-format pictorial cycle installed on the ceiling and made with oil technique on canvas, replacing what should have actually been solved with a fresco technique. The constraints established by its size and location compromised over time its stability, both dimensional and structural, referring the restoration work to the solution of these problems by studying entealing systems and tested through physical-mechanical measurements in the laboratory. This has been the purpose of our research, to try to rationalize the materials and techniques involved in this discipline of restoration on textile support, in order to optimize handling resources and solutions to the always controversial task of the entealing.

Historically, these processes were originated in Italy and France in the late 17th century and were commonly performed through the use of paste from natural adhesive mixtures based on paste glues, recipe that was quickly disseminated throughout the West. Later, in the Netherlands, due to environmental and geographical conditions, the ingredients were modified from the inclusion of resin wax mixtures. These two basic formulas were taken as a pattern until well into the 20th century, where from the second half we begin to experiment and gradually introduce adhesives based on synthetic resins.

Our main interest and contribution through this research has been the study of the old entealing techniques, as well as their alterations and problems, to respond to the current needs in this matter, and more specifically with regard to large-format works. The formula through the so-called *sándwich* type entealing has been the option, which after our testing, has responded more appropriately to open expectations. The incorporation of this intermediate layer has sought to achieve an optimal level of stability in the support, as well as reversibility of the treatments and, to avoid ultimately, the interposition of textures between layers.

Through the testing of the three fundamental groups of materials that make up this type of entealing, consisting of: intermediate layers, reinforcing fabrics and adhesive systems, a protocol of actions has been drawn up with a view to observe the most secure options for its implementation. As a results, an attempt has been made to establish a basic model to meet the needs of these extraordinary systems, but necessary in large format entealing processes.