

## FILLING LACUNAE

### A possible approach to the conservation of an Oriental lacquer

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#### INTRODUCTION OF THE ART WORK



Figure 1  
Detail shows the coloured engrave figures during the filling process and after treatment

The screen shown in **figure 2** is part of the collection of Cavour's Castle in Santena (Piedmont, Italy); probably it was originally made up by 12 panels, then later divided in 2 different screens each composed of 4 and 6 panels.

The Conservation Centre "La Venaria Reale", within a Scientific Research Programme named "A bridge between Orient and Piedmont" based on Oriental artefacts techniques and imitation lacquers in Piedmont area, has the opportunity to study and restore this object. The present study will be focused on the screen with four panels. The disassembling of the single artifact into two screens was the cause of major alterations of the artifacts. The screen in question has no figurative consequentiality: the representation appears interrupted and discontinuous. In the same occasion a painted frame with a decoration similar to the original was added to the two panels at the sides, to reproduce the correct dimensions of the panels, and leather strips were applied on the profiles of each panel.

The methodological approach consisted in a preliminary historical and artistic study of these type of lacquer furnitures, through the comparisons with other lacquerware.

The Coromandel lacquer screen was imported from Asia to Europe in the eighteenth century, those objects reflect the diffuse taste of Europeans for exotic works of art.

The scientific investigations carried out on the selected set of samples helped to answer questions concerning the painting technique and surface deterioration of the screen composed by four panels. Non-invasive and micro-invasive scientific analysis were performed before the conservation treatment in order to investigate the condition state of the object and to identify materials and techniques. Furthermore, the results obtained through X-ray radiography allowed us to recognize the original single screen composed by ten panels later divided into two screens.

No previous conservation treatments are documented. An old resin applied during a previous restoration was present, visible in UV light on quite all the surface.

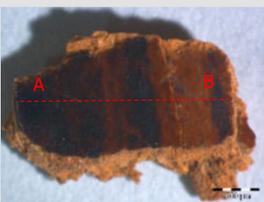
The results of the invasive GC-MS and FT-IR analysis indicated that the animal glue was used probably as a binder of the polychrome engraved surface, rather than oriental lacquer used on the background. In particular the binding media of the thick ground layer is egg.



Figure 2  
Coromandel screen composed of 4 panels.  
XVIII century, Cavour's Castle, Santena, Piedmont, Italy.

#### ANALYSIS OF THE

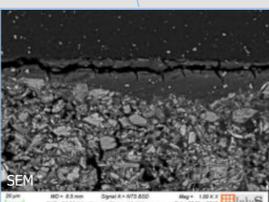
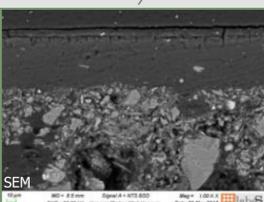
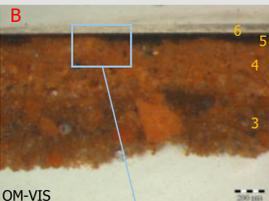
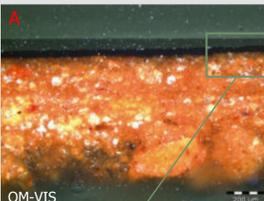
#### LACQUER TECHNIQUE



The lacquer background is not homogeneous in colour, some areas are black but some zones show vertical brown-light brown strips. The cross-section of a sample taken in this area shows different thickness of oriental lacquer, from around 60 µm in black zone (A) reduced to 40 µm in more light brownish zones (B).

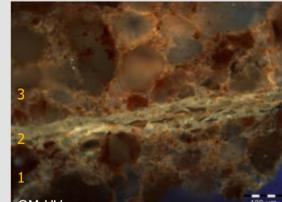
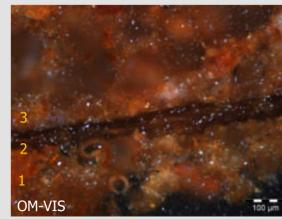
This "flamed effect" is probably due to lack of technical care where the ground layers were not enough smoothed and the lacquer layers not enough thick to have sufficient hiding power.

This effect is most common on Chinese large size artefact from the second part of the XVIII century, made on purpose for the European Western market.



#### Stratigraphic sequence found on lacquered background

6. natural organic varnish (old maintenance)
5. oriental lacquer
4. ground layer: fine clay grains
3. ground layer: coarse clay grains
2. Fiber interlayer
1. ground layer: coarse clays, quartz, kaolin



#### CONSERVATION TREATMENT: FILLING LACUNAE

##### STEP 1: APPLICATION OF JAPANESE PAPER



This sequence of images shows the integration of losses of the paintings layers, performed with the technique here describe: application of Japanese paper 6 g/m<sup>2</sup> on the wooden support to separate plaster from wood and make the intervention more reversible. The paper was pasted with a 3% cellulose-based adhesive (Tylose mh 300p) in demineralized water add to a 1% thermoplastic acrylic resin (Plextol B500) useful to give it more elasticity.

##### STEP 2: FILLING OF THE GROUND' LOSSES



The images shows the filling of the ground's losses: a mixture of gypsum and animal glue 1:14 (Rabbit glue) with the addition of pigments was formulated to simulate the clay ground. The application of the plaster was carried out in different steps by using brushes and palettes, the surface was subsequent burnished by using different sandpapers.

The technique providing brilliant surfaces similar to Oriental lacquer and allows an easy identification of the conservation treatments. The transparent "flamed effect" was recreated spreading water colours with a brush.

##### STEP 3: TREATMENT OF THE PAINTING LAYERS



This sequence of images shows the filling of the colours and ground's losses inside the carving figures filled with the mixture of gypsum and animal glue with the addition of pigments the surface was then darker tonalized by using similar water colours.

##### STEP 4: STENCIL AND ENGREVING



The losses of the painting layers, originally engraved in the lacquer and subsequently coloured, was not possible to recreated because it could not be a recognizable intervention.

The method used in this case allows to recreate the figures: the drawing was reported by designed different stencil then carved with an electric micro cutter; the result are low raised figures like the original ones whitout any colour in it (figure 1).

