

## Press conference

### *Intervention of Prof. Piero Savarino*

The jobs for the conservation began in 1992 when His Eminence the Cardinal Saldarini reunited a narrow number of experts in conservation and restoration of ancient cloths in order to obtain indications on the jobs to carry out.

The group supplied the suggestion unanimously to conserve the Shroud extended, deprived of the edges and drapes that accompanied it, in an inert atmosphere. Moreover, it suggested, then, to continue the works with the removal of the patches and the Holland cloth. On this last point, the opinions were not unanimous. Some, in fact, suggested, with the politics of the step after step, to act, while others preferred to carry out preventive surveys of data in order to act later.

Starting from these indications, at first it has been seen to eliminate the drapes and the edges, and subsequently to conserve the Shroud in extended position overcoming a long series of technological difficulties (construction of the case and the related pressure compensation systems, inert gas and its conditioning, control system of all the system, etc). In the course of these works, the Shroud has been the object of a series of careful observations. As an example, it had been found that under the patch situated near the foot (look at figure 1), a considerable amount of foreign substances was present. Therefore, the possible presence of polluting systems also under the central patches had been feared. The decision of intervening, guaranteed by the Holy See, has been taken with the will to proceed by degrees and intervene with means proportioned to the situation that, moreover, had to be verified moment by moment.

In fact, the imagination had not succeeded in previewing the real situation. Look at figure 2, in which it is noticeable, on the edge of the patch, a worrisome presence of the most fine dust of carbonic material.

A microscopic observation, carried out with the equipment placed at disposal by Dr. Tomedi, has evidenced that the carbonic material is present on the Holland cloth and also on Shroud sites far from the burns. Figures 3 and 4 are to be observed. On the Shroud sites not closely adjacent to the burns it has not been intervened, in order to avoid to alter and to make successive searches impossible.

The intervention has followed the following criteria:

- a) Improvement of the conservation conditions removing the polluting parts on the edges of the burns, avoiding obviously of damaging the Shroud.
- b) Collection, cataloguing (on the basis of the position) and delivery to the Papal Custodian of the parts removed on the edges of the burns and without carrying out cuts.
- c) Replacement of a cloth of support in order to supply an adequate mechanical support to the Shroud.
- d) Carrying out of observations and measures (on the posterior part) difficultly feasible in successive times. The surveys have been executed using a purposely constructed instrument (look at figure 5) and in a position to directly carrying the various sensors of the instruments on the sites of measure. The system has been studied by the Eng. Arduino and realized by the company ADL. In this context photographic surveys (work group directed by the Gian-durante studio) and scanning (work group directed by Prof. Soardo) have been carried out. Photographic surveys in fluorescence (executed by the work group of the scientific police of Turin directed by Dr. Celia). Moreover, recordings of reflectance spectra UV-VIS, spectra of fluorescence and Raman spectra have been carried out. The fluorescence and reflectance spectra have been carried out by the company Laser Point, cured by Dr. Pellegrini and Dr.

Caldironi. The Raman spectra have been executed by the Renishaw company, cured by Dr. Tagliapietra and Eng. Orsi. The results of the measures have been delivered to His Eminence Cardinal Poletto, Papal Custodian of the Shroud, to be put at disposal for successive researches.

- e) On sites object of spectrophotometric measures on the back of the Shroud, they carried out sampling, with the methods of the suction and the adhesive tape. The sampling, carried out in the presence of the Chancellor of the Curia, have been sealed and taken by the same Chancellor. The choice of the sites has been carried out by Prof. Baima Bollone with the approval of the entire commission. Prof. Baima Bollone has moreover seen to carry out the sampling in the presence of the same commission.
- f) Carrying out of a series of microscopic surveys with the use of the equipment supplied by Dr. Tomedi.

The particulars and techniques connected more specifically to the operation of conservation will be later described by Dr. Fleury-Lemberg on single demand of the present ones. Here we only describe the most important operations that Dr. Fleury-Lemberg has executed with the aid of Dr. Tomedi. The Shroud has been at first supported on neutral paper of rice with the image turned down. Then, the Holland cloth has been unstitched and after the patches. All the carbonated material has been removed from the sites under the patches. Such material was made up by a very fine dust. Without cuts, the material still weakly connected to the cloth has been removed. Subsequently the over cited surveys have taken place. At the end of such surveys, the operation of sewing again the Shroud on the new cloth of support has begun. The operation has been led turning the Shroud (without ever raising it extended) by a careful series of position variations, that have guaranteed its absolute safety. We are not giving technical details, even if interesting, but we want to emphasize here the absolute very high level of professionalism shown by Dr. Lemberg and Tomedi who carried out their engagement with dedication, ability and respect for the Shroud. The results obtained are noticeable in the following figure, in which the photographs of the Shroud before and after the intervention are compared.

Therefore, the comparison does not leave doubts on the positive quality of the work carried out.

Turin, September 21, 2002