



FABBRICA DI S. PIETRO
IN VATICANO

BALDACHIN ON THE HIGH ALTAR OF ST. PETER'S BASILICA IN THE VATICAN

RESTORATION OF METALLIC SURFACES (BRONZE AND IRON)

Generally, the most suitable methods for cleaning bronze are mechanical, focusing on manually performed operations. Tools such as scalpels, manual brushes with thin bristles, micro-drills equipped with small grinding stones or abrasive rubber tips, steel wire brushes, vibro-engravers, acoustic abraders, etc., are used to reduce the thickness of corrosive patinas without completely eliminating them, achieving results that are quite convincing from an aesthetic point of view. With these methods, the surfaces of the object can be controlled zone by zone as the work progresses. In the case of the baldachin, however, since the metal surfaces are relatively well-preserved, the proposed intervention will be very different: it will mainly involve removing layers of various types of deposited dirt with solvents, packs, or other methods, without affecting the original patinas or gilding. The goal is to free the bronze, which is partly tarnished and partly gilded, from the overlying layers that mar its appearance and obscure its original splendor. Various tests will be carried out to establish the most suitable method. The process will be carried out manually, centimetre by centimetre, by highly qualified restorers.

Conservation treatments for bronze will involve the following phases:

- Washing the metal first with normal water and then with deionized water.
- Treating the metal in order to arrest corrosion.
- Applying surface protection in multiple layers.

Conservation treatments for iron will involve the following phases:

- Mechanical cleaning of surfaces to remove non-coherent products of corrosion.
- Washing the metal first with normal water and then with deionized water.
- Treating the metal with products that prevent corrosion inhibitor convert rust.
- Applying surface protection.

If necessary, at the end of the cleaning operations, conservation treatments, and after the application of any protection, touch-ups will be carried out by using paint to balance out colour and to fill in any small gaps with coloured epoxy resin.