

THE REHABILITATION OF THE HOLY AEDICULE

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ABSTRACT

The present work regards the scientific governance of the complex, integrated and interdisciplinary project for the rehabilitation of the Holy Aedicule of the Holy Sepulchre. A diagnostic study documented the structure, identified the construction layers, the prevailing decay problems and described the necessary compatible and performing materials and interventions. The rehabilitation works that followed, involved many processes. The external façade stones were disassembled, cleaned and conserved. A disintegrated filler mortar layer was removed and the masonry was cleaned and repointed; damaged masonry areas were reconstructed. Dislocated columns and panels were reset and anchored with titanium anchors. The masonry was strengthened with the injection of compatible and performing grouts. A titanium mesh was installed and the external façade stones were reassembled into their reset position, anchored with titanium connectors; the interlayer was filled with an optimized mortar, designed for this purpose. The Aedicule's interior and external surfaces underwent cleaning, conservation and protection interventions. Preservation and highlighting of the monument's values were at the core of the rehabilitation interventions. During grouting, the Holy Tomb was opened for the first time in centuries, for its protection, and was documented with NDTs. The rehabilitation included strengthening, cleaning and conservation interventions at the Onion Dome of the Holy Aedicule, the Domes of the Burial Chamber and the Chapel of the Angel. The Holy Aedicule emerges as an emblematic center of innovative applications, research and Education.

Key-words *Holy Aedicule, Rehabilitation Interventions, Integrated Interdisciplinary Approach*