



The church of saint. Gioacchino in. Pontenuovo: weathering analysis for a new function

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The ancient church of St. Gioacchino rises along the ancient Aragonese walls of the Naples, in the Pontenuovo quarter. Saddly, today it is in such abandonment condition to constitute a refuge for drug addicts and for homeless. Such abandonment has caused a strong degrade that becomes more and more substantial in time.

The elegant architecture of the church, in its simplicity and linearity, suffers the decay due to the detachment of the plaster, consequence of the presence of the dampness both on the inside face of the external main walls and on the structure of the dome.

The church of S.Gioacchino was built in the 6th century to provide a refuge to orphan young girls. It is aisleless church and has a rectangular plant.

The façade of the church is defined by two orders: the lower order has a portal in piperno with columns supporting an important broken triangular tympanum; the upper

order is linear and it has a frame, partly destroyed, and a central window with an ogive-arch.

The building structure is made in tufa. Black crusts cover today the tufaceous stones, making unrecognizable their native color and the damp has caused the spillage of salts, with a consequent exfoliation of them in some areas.

The porosity of the stones and their elevated absorption coefficient are the principal cause of decay, the pores are influenced by the variations of temperature and damp.

The growing porosity is the most evident phenomenon, consisting in the formation of holes and hollows that are well visible at the surface of stones.

An restoration project was planned in order to assign to the church a new function.

The interventions of consolidation of the external main walls are aimed to the preservation of the structural system and of the materials, indicating proper techniques of reconstitution of the static equilibrium instead that substitutive interventions. Analogously, the materials and the techniques of the Neapolitan building tradition, as the unplastered masonry (yellow tufa, imbrignite, clay bricks), the stones (piperno, trachite, stone of lava, marbles), the metallic elements (wrought iron, ghisa, copper), are intended to be preserved following the statements of a proper restauration, that is with the choice of noaggressive techniques and reversible interventions.

The research is part of a wider study concerning the revitalization of the churches no more in use in the ancient Center of Naples, having as goal the definition of a correct and exhaustive mapping of the phenomena of decay followed by the pointing out of the overall effective interventions in future project of recovery.