

**FRAGOKASTELLO SFAKIA: RESTORATION AND CONSERVATION
THROUGH COMPATIBLE ARCHITECTURAL, STRUCTURAL AND
CONSTRUCTION MATERIALS**

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ABSTRACT

Castello San Nikita, called Frangokastello, which was built by the Venetian authorities, between 1371-1374 in southeaster Crete, today is presented in a great decay state. The principles of restoration and conservation and the requirement of compatibility between original materials and inner structure, as well as technical solutions for the restoration and conservation are the subject of this study.

In the architectural interventions, the values that time has incorporated on the towers and the walls, in correlation with value as symbol of freedom and independency, has been considered as main criteria to work with. Emphasis was given on the analysis of original plasters before the design of the conservation mortars, compatible to the original ones and paying particular attention to enhance their resistance to the environmental loading. The structural behaviour of the masonry castle, were studied by the finite element method, taking into account the pathology of the structure which affects its mechanical response and finally the required actions for the reinforcement of the structure.

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