

## Tre esempi di lavaggio desalinizzante a Venezia

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### Abstract

This article discusses an experimental technique used to reduce the concentration of soluble salt build up within brick walls using tap water with a system similar to one used in plant irrigation. The method has successfully been implemented on three buildings in Venice where soluble salts are the major cause of decay to historic buildings. The article describes the methodology used for the analysis of salt concentration before and after the washing process and the achieved reduction of the concentration of chlorides, nitrates and sulphates (from initially max. 10 to approx. 0,5 percentage of the weight of the bricks). Further, the article discusses techniques using led barriers against rising moisture, quantities of water consumption (varying from 8 to 95 cubic meters of water per cubic meter of washed wall depending on the initial salt concentration, the thickness of the wall and the typology of mortar and bricks), the implementation time (approx. 3 months), drying time (approx. 2 months during the warm season), the cost (which is according to water consumption 4-14 times less expensive than the more common demolition and reconstruction of deteriorated walls).

**Keywords:** *Venice, restoration, conservation of historic wall structures, washing-out soluble salts*