



International Course on Stone Conservation SC13

SESSION: Treatment with water repellants

INSTRUCTOR: Gottfried Hauff

TIME: Thursday, 13th June/ 11:30 – 13:00 (1.5 hours)

SESSION OUTLINE

ABSTRACT

Two frequently used groups of water repellents are waxes and silicones. The main differences between the two substances are the methods of application and the influence on open porosity and water vapour permeability, i.e. the drying capacity of the stone. Within conservation practice, our knowledge of waxes as a water repellent is based more on empirical evidence, most likely attributable to longer historic use. In contrast, our understanding of silicones is grounded in more recent scientific research into the durability, retreatability, methods of application, and the potential dangers of silicones to the object, environment and user.

OBJECTIVES

To develop a basic understanding of the advantages, disadvantages and limitations of wax and silicone water repellent treatments.


CONTENT OUTLINE

- Why apply a water repellent?
- When should a water repellent be applied?
- What are the criteria for deciding to use (or not to use) a water repellent?
- Traditional wax treatments and methods of application
 - Assessing effectiveness (hydrophobicity/repellency) and durability
 - Evaluating performance
 - Issues of removal and retreatability
- Modern silicone treatments and methods of application
 - Assessing effectiveness (hydrophobicity/repellency) and durability
 - Evaluating performance
 - Issues of removal and retreatability
- Assessment of the use of water repellents for different types of stone and object conditions


READINGS

 = Essential reading material

 = Available online

-  Sasse, H.R.; Snethlage, R.: Methods for the Evaluation of Stone Conservation Treatments, in: "Saving our architectural heritage : the conservation of historic stone structures : report of the Dahlem Workshop on Saving our Architectural Heritage--The Conservation of Historic Stone Structures, Berlin, March 3-8, 1996." Wiley & Sons, Chichester 1997. p. 223-243

SESSION OUTLINE CONT'D

-  Wendler, E.: New Materials and Approaches for the Conservation of Stone, in: "Saving our architectural heritage : the conservation of historic stone structures : report of the Dahlem Workshop on Saving our Architectural Heritage--The Conservation of Historic Stone Structures, Berlin, March 3-8, 1996." Wiley & Sons, Chichester 1997. p.181-196

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