



International Course on Stone Conservation SC13

SESSION: Moisture & its control; Methods of control; Site visit – Basilica of San Clemente

INSTRUCTOR: Ippolito Massari

TIME: Thursday, 16th May /All day

SESSION OUTLINE

ABSTRACT

The control of moisture in historic building requires a variety of solutions which can range from major interventions such as the installation of a damp-proof course, to minimal intervention strategies such as dehumidification or adjusting environmental control systems. The range of treatment options for moisture problems are presented, including several case studies from Rome and Venice. A afternoon site visit to the Basilica of San Clemente in Rome will also illustrate various approaches to mitigating moisture in a complex historic building/archaeological site.

OBJECTIVES

By the end of this session participants will:

- Understand the range of treatments available for moisture problems in historic buildings
- Be able to select an appropriate treatment based on an accurate diagnosis of the moisture source and its effects on the structure.
- Learn about pre- and post-treatment moisture and humidity monitoring strategies.

CONTENT OUTLINE


- Measures to counter humidity rising from the subsoil:
 - Reduction of the wall section
 - Damp-proof courses:
 - Traditional *cuci e scuci* (stitch & unstick) method of installing lead damp proofing
 - Core-drill and resin damp-proofing
 - Electro-osmosis
 - Installation of subfloors
 - Under floor heating
- Condensation
 - Defense against condensation including counterwalls, vapor barriers and temporary heating
- Ventilation and heating systems
 - Efficacy and limitations of heating systems against humidity
 - Adjustments to heating systems required for damp buildings
- Protection of artworks
 - Wall paintings – case study of Leonardo's Last Supper
 - Marble cladding
- In the afternoon participants will visit the Basilica of San Clemente and its subterranean archaeological site which includes the multi-layered remains of several churches and Roman ceremonial buildings. Many strategies have been used to combat moisture at the site including the reduction of wall sections below significant wall paintings and the installation of a large dehumidification system.

SESSION OUTLINE CONT'D

READINGS

 = Essential reading material

 = Available online

 Massari, Giovanni, and Ippolito Massari. 1993. *Damp Buildings, Old and New*. ICCROM Technical Notes Series. Rome: ICCROM

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