Target Group

The course is aimed to conservators, stone-masons and craftsman dealing with restoration and conservation of stone, masonry and plaster.

Contact

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Training Course

CaLoSiL

Physico-chemical fundamentals

Applications

Application Techniques

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CaLoSiL is a new stone, plaster or masonry consolidant based on colloidal calcium hydroxide. Treatment with CaLoSiL results, after evaporation of the solvent, in the formation of solid calcium hydroxide. That converts into $CaCO_3$ (limestone) in a way similar to traditional lime mortars by reaction with atmospheric carbon dioxide. Due to the extremely fine particle size, CaLoSiL can penetrate deep into stone, masonry or plaster. CaLoSiL is available in different product types. They differ in the solvent and the calcium hydroxide concentrations. Typical particle sizes are between 50 and 150 nm.

The training course summarizes the development of CaLoSiL and gives an overview about the physico-chemical fundamentals of stone consolidation with CaLoSiL. The properties of the different CaLoSiL types are presented and rules for the selection of the most favorable product will be discussed. Another main subject is the combination of CaLoSiL with silicic acid esters. Properties and characteristics of stones treated with CaLoSiL and silicic acid esters will be summarized.

The training course offers many possibilitytes to test CaLoSiL. Several laboratory tests are prepared in which the participants are invited to test handling and application of CaLoSiL. The tests include consolidation of mortar, sandstone and plaster. Also testing of CaLoSiL on own materials is possible.

Time table

09:30 – 09:45
Opening

09:45 – 10:45
Fundamentals of CaLoSiL
History, development, production, applications

10:45 Coffe break

11:00 – 11:45
CaLoSiL – stone consolidation by carbonisation
- Fundamentals, reactions, mechanism -

11:45 – 12:30
CaLoSiL in combination with silic acid esters
- Fundamentals, reactions, mechanism -

12:30 – 13:30
Lunch

13:30 – 14:30
Application Techniques

14:30 – 16:00
Laboratory tests
Different CaLoSiL types can be tested on natural and artifical stones

16:00 Coffe break

16:15 Final discussion