



HYDROPHOBE V

Fifth International Conference on Water Repellent Treatment of Building Materials

April 15-16 2008

Royal Institute for Cultural Heritage, Brussels, Belgium

Programme

Tuesday, 15 April 2008

1. Bricks and Stones

8h00-9h00	Registration and Coffee
9h00-9h15	Welcoming Address <i>M. Serck-Dewaide, H. De Clercq</i>
9h15-11h15	Session 1.1: Analytical Approach – Application Techniques <i>Session Chair: Prof A.E. Charola (PT)</i>
9h15	<u>Invited Lecture</u> : Evolution of Silocone Based Water Repellents for Modern Building Protection <i>M. Roos, F. König, S. Stadtmüller, B. Weyerhausen (DE)</i>
10h00	Function of Silane Type on its Reactivity for Surface and In-Depth Applications to Different Substrates <i>H. De Clercq (BE)</i>
10h25	X-Rays and Neutrons Used for the Visualisation of Oligomeric Siloxanes <i>V. Cnudde (BE), B. Masschaele (BE), J. Vlassenbroeck (BE), M. Dierick (BE), Y. De Witte (BE), E. Lehmann (CH), L. Van Hoorebeke (BE), P. JS. Jacobs (BE)</i>
10h50	TEOS and Silicon Based Water Repellents: Influence of Application Order and Timing <i>H. De Clercq, S. De Zanche (BE)</i>
11h15-11h45	Coffee Break
11h45-13h20	Session 1.2: Moisture Transport <i>Session Chair: Prof. E. Borrelli (IT)</i>
11h45	<u>Invited Lecture</u> : Water and its Interaction with Porous Building Materials <i>E. Wendler (DE), A.E. Charola (PT)</i>
12h30	Measurement of Humidity in Sandstones Treated with Water Repellent Agents <i>K. Littmann, S. Behre (DE)</i>
12h55	The Drying Behaviour of Building Materials Treated with Anti-Graffiti <i>B. Lubelli, R.P.J. van Hees, T. van de Weert (NL)</i>
13h20-14h30	Lunch



14h30-16h10	Session 1.3: Durability <i>Session Chair: Prof. R. van Hees (NL)</i>
14h30	Salt Crystallization in Hydrophobic Porous Materials <i>H. Derluyn, A.S. Poupeleer, D. Van Gemert, J. Carmeliet (BE)</i>
14h55	Performance of Limestone Contaminated with Binary Mixtures of Sodium Sulphate and Treated with a Water Repellent <i>H. De Clercq (BE)</i>
15h20	An Unsatisfactory Case of Water Repellents Applied to Control Biocolonization <i>A.E. Charola, J.D. Rodrigues and, M.V. Anjos (PT)</i>
15h45	Which Factors Influence Most the Durability of Water Repellent Treatments : Stone Properties, Climate or Atmospheric Pollution? <i>C. Moreau, L. Leroux, V. Vergès-Belmin, G. Frontea and, V. Barbin (F)</i>
16h10-16h30	Coffee Break
16h30–18h30	Session 1.4: Standardisation <i>Session Chair: Prof. K. Littmann (DE)</i>
16h30	Water Repellents and Anti-Graffiti: a Standard Safe Approach ? <i>Y. Vanhellemont, H. De Clercq and M. Van Bos (BE)</i>
16h50	Water Repellent Treatment of Porous Materials. A New Edition of the WTA Leaflet <i>E. Wendler and E. von Plehwe-Leisen (DE)</i>
17h10	Nordic Method: Performance Tests for Protective Sacrificial Coatings on Mineral Surfaces <i>K. Malaga and T. Bengtsson (SE)</i>
17h30	Proposal for a Test Procedure for Injection Products against Rising Damp <i>Y. Vanhellemont, H. De Clercq and A. Pien (BE)</i>
17h50	Update on the Activities of the Technical Committee 346 - Conservation of Cultural Property - After a Three Year Period <i>V. Fassina (IT)</i> Discussion workshop on terminology within the field of water repellent treatments <i>F.H. Wittmann (DE), A.E. Charola (PT)</i>
18h30	Reception



Wednesday, 16 April 2008

2. Concrete

8h30-10h50	Session 2.1: Chemical - Microstructure <i>Session Chair: Prof. F.H. Wittmann (DE)</i>
8h30	TOF/MS for Characterization of Silicone Based Water Repellents <i>H. Herb and A. Gerdes (DE)</i>
8h55	Reactive Transport of Silanes in Cement based Materials <i>D.S. Oehmiche, A. Gerdes and A. Wefer-Roehl (DE)</i>
9h20	Investigation of Siloxane Film Formation on Functionalized Germanium Crystals by Atomic Force Microscopy and FTIR-ATR Spectroscopy <i>J. Glowacky, S. Heißler, M. Boese, H. Leiste, T. Koker, W. Faubel, A. Gerdes and H. S. Müller (DE)</i>
9h45	Computational Chemistry to Investigate the Chemical Behaviour of Silanes and CSH-Gel <i>J. Suessmuth and A. Gerdes (DE)</i>
10h10	Hydration Process and Microstructure Development of Integral Water Repellent Cement Based Materials <i>V. Spaeth, MP. Delplancke-Ogletree and JP. Lecomte (BE)</i>
10h35	The Influence of Silicone based Water Repellents as Admixtures on the Rheological Properties of Cement Slurry <i>F.L. Maranhao, V.M. John, K. Loh and R.G. Pileggi (BR)</i>
10h50-11h15	Coffee Break
11h15-13h20	Session 2.2: Moisture Transport – Chloride Contamination <i>Session Chair: Prof. J. Silfwerbrand (SE)</i>
11h15	Sorption Isotherms of Water Repellent Treated Concrete <i>A. Johansson, M. Janz, J. Trägårdh and J. Silfwerbrand (SE)</i>
11h40	Moisture Diffusion in and Capillary Suction of Integral Water Repellent Cement based Materials <i>P. Zhang (CN), F.H. Wittmann (DE), B. Villmann (DE), T. Zhao (CN) and V. Slowik (DE)</i>
12h05	Influence of Cracks on the efficiency of Surface Impregnation of Concrete <i>F.H. Wittmann (DE), P. Guo (CN) and T. Zhao (CN)</i>
12h30	Investigation of Chloride Ingress in Cracked Concrete Treated with Water Repellent Agents <i>J.Dai, Y. Akira, E. Kato and H. Yokoto (JP)</i>
12h55	On Surface Impregnation of Chloride Contaminated Cement based Materials <i>T. Zhao (CN), G. Zhu (CN), F.H Wittmann (DE) and W. Li (CN)</i>
13h20-14h30	Lunch



14h30-15h35	Session 2.3: Durability <i>Session Chair: Prof. L. Schueremans (BE)</i>
14h30	Long-Term Measurements on Chloride Ingress in Water Repellent Treated Concrete in a Road Tunnel Environment <i>A. Johansson, M. Janz, J. Trägårdh and J. Silfwerbrand (SE)</i>
14h45	Durability of Hydrophobic Treatments on Concrete – Results from Laboratory Tests <i>T. Büttner, M. Raupach (DE)</i>
15h10	Impregnation of Concrete Bridge Elements Exposed to Severe Environment – Is It Cost-Effective? <i>J. Silfwerbrand (SE)</i>
15h35-16h00	Coffee Break
16h00-17h15	Session 2.4: Case Studies <i>Session Chair: Prof. A. Gerdes (DE)</i>
16h00	Durability of Water Repellents in a Marine Environment <i>L. Schueremans (BE), D. Van Gemert (BE), M. Friedel(DE) and S. Giessler-Blank (DE)</i>
16h25	Protection of Existing Highway Bridges by Means of Water Repellent Treatment – A Pilot Project <i>T. Gebhart (DE)</i>
16h50	Decreasing Humidity in Concrete Facades after Water Repellent Treatments <i>A. Johansson, B. Nyman and J. Silfwerbrand (SE)</i>
17h15	Closing Remarks <i>A.E. Charola (PT)</i>
17h30	Reception