THIRD SYMPOSIUM ON DURABILITY OF BUILDING AND CONSTRUCTION SEALANTS AND ADHESIVES

Sponsored jointly by ASTM Committee C24 on Building Seals and Sealants and RILEM, International Union of Laboratories and Experts in Construction Materials, Systems and Structures

June 25-26, 2008
Hyatt Regency Denver
Denver, Colorado
USA

Symposium Chairman: Andreas T. Wolf
Dow Corning GmbH
Wiesbaden
Germany

WEDNESDAY, JUNE 25, 2008

8:00 AM
Opening Remarks
Andreas T. Wolf, Symposium Chair

SESSION 1: DURABILITY OF SEALANT AND ADHESIVE SYSTEMS AND COMPONENTS

Session Chair: A. Wolf
Dow Corning GmbH
Wiesbaden
Germany

8:15 AM
Durability of Materials to Waterproof Vehicular Parking Roofs
S. Vesely, M. Puterman, Itumex Ltd., Haifa, Israel

8:45 AM
Improving Long-term Energy Performance of Insulating Glass in Buildings
G. Reichert, Edgetech I.G. Inc., Cambridge, OH, USA

9:15 AM
Joint Sealing Systems for Pavements – A New Approach for a Performance Related Assessment of Capability and Durability
C. Recknagel and S. Pirskawetz, Federal Institute for Materials Research and Testing, Berlin, Germany
Third Symposium on Durability of Building and Construction Sealants and Adhesives, Wednesday, June 25, 2008, Session 1, continued

9:45 AM       BREAK

10:15 AM
Water Penetration of Cladding Components - Results from Laboratory Tests on Simulated Sealed Vertical and Horizontal Joints of Wall Cladding
M. A. Lacasse, NRC Canada, Ottawa, ON, Canada; and H. Miyauchi, Tokyo Institute of Technology, Yokohama, Japan

10:45 AM
Seismic Performance of Four-Sided Structural Silicone Glazing Systems
A. M. Memari, M. Royer, R. Behr, and P. Kremer, Penn State University, University Park, PA USA

11:15 AM
Light curing acrylates in glass structures
B. Weller and S. Tasche, Technical University of Dresden, Institute of Building Construction, Dresden, Germany

SESSION 2: DURABILITY OF SEALANTS AND ADHESIVE SYSTEMS AND COMPONENTS – PART 1

Session Chair: E. Bull
Momentive Performance Materials
Waterford, New York
USA

11:45 AM
Durability Potential of Silyl Terminated Polyacrylate Based Construction Sealant
Y. Nakagawa, Kaneka Corporation, Takasago, Hyogo, Japan

12:15 PM
An Attempt to Find a Correlation between Environmental and Accelerated Weathering According to RILEM TC 139-DBS in Polyurethane One-Component Sealants Applied on Concrete
E. Pozzi, V. Carcano, and A. Ausilio, Mapei Spa, Milano, Italy

12:45 PM       LUNCH (On Your Own)

2:00 PM
Application of Adhesive Bonding of Ultra-High Performance Concrete (UHPC) at the Gärtnerplatz Bridge in Kassel, Germany
R. Krelaus, M. Schmidt, and E. Fehling, University of Kassel, Department of Civil Engineering, Kassel, Germany
Third Symposium on Durability of Building and Construction Sealants and Adhesives, Wednesday, June 25, 2008, Session 2, continued

2:30 PM  
**Using Rheology Test Methods on Cured Elastomers to Assess Durability Undergoing Cyclic Deformation**  
G.V. Gordon, L.D. Lower and L.D. Carbary, Dow Corning Corporation, Midland, MI, USA

3:00 PM  BREAK

SESSION 3: FIELD STUDIES

Session Chair:  L. Carbary  
Dow Corning Corporation  
Midland, Michigan  
USA

3:30 PM  
**Nondestructive Field Testing of Sealed Joints**  
D. Huff, Consultant, Salem, OR, USA

SESSION 4: DURABILITY OF SEALANTS AND ADHESIVE SYSTEMS AND COMPONENTS – PART 2

Session Chair:  L. Carbary  
Dow Corning Corporation  
Midland, Michigan  
USA

4:00 PM  
**Does Imposed Strain Affect Modulus Change in Sealant Subjected to Outdoor Weathering?**  
C. White, D. Hunston, K. T. Tan, National Institute of Standards and Technology, Gaithersburg, MD, USA; and S. Williams, Forrest Products Laboratory, Madison, WI, USA

4:30 PM  
**Durability Characterization and Prediction for Adhesives Used in FRP Rehabilitation**  
V.M. Karbhari, University of California San Diego, La Jolla, CA, USA

5:00 PM  
**High Strain Rate Testing of Structural Silicone**  
E. Bull, Momentive Performance Materials, Waterford, NY, and D. Buckley, GE Global Research, Niskayuna, NY, USA
Third Symposium on Durability of Building and Construction Sealants and Adhesives, Wednesday, June 25, 2008, Session 4, continued

5:30 PM  
Closing Remarks  
A. Wolf, Symposium Chair

5:45 PM  SYMPOSIUM ADJOURS FOR THE DAY

7:00-8:00 PM  RECEPTION (CASH BAR)

THURSDAY, JUNE 26, 2008

SESSION 5: INNOVATIVE APPROACHES INTENDED TO IMPROVE SEALED JOINTS OR ADHESIVE FIXATION DURABILITY

Session Chair:  J. Klosowski  
Engineering Diagnostics Inc.  
Bay City, MI  
USA

8:00AM  
Opening Remarks  
Andreas T. Wolf, Symposium Chairman

8:15 AM  
Evaluation of Silicone Sealants at High Applied Load Velocities  
K. Yarosh, Dow Corning Corporation, Midland, MI, USA; and A. T. Wolf and S. Sitte, Dow Corning GmbH, Wiesbaden, Germany

8:45 AM  
Durability by Design: New Results on Load Carrying Silicone Bonding  
A. Hagl, A. Hagl Ingenieursegesellschaft GmbH, Muenchen, Germany

9:15 AM  
Relating Artificial Weathering Testing to Service Life Estimation of Structural Glazing Systems  
D.M. Burns, K.L. White, and S.R. Austin, 3M Center, Maplewood, MN, USA

9:45 AM  BREAK
10:15 AM
**High Performance Acrylic Sealant for Tilt-Up Applications**
V. Demarest, A. Liss, and R. Queenan, Rohm & Haas, Springhouse, PA, USA; and P. Gorman, Moisture Protection, El Paso, TX, USA

---

### SESSION 6: DURABILITY OF ADHESION AND INTERFACES

**Session Chair:** V. Demarest  
Rohm & Haas Corp  
Springhouse, PA  
USA

10:45 AM
**Development of Adhesion of Organic and Silicone Sealants on Wet and Dry Concrete**
F. Gubbels and C. Calvet, Dow Corning, Seneffe, Belgium

11:15 AM
**Surface Moisture as an Indicator for Durability of Bonded FRP System**
D. Mukai, J. Deng, J. Tanner, and C. Dolan, University of Wyoming, Laramie, WY, USA

11:45 AM
**Adhesion of Silicone to Urethane Sealant**
J. Klosowski and D. Nicastro, Engineering Diagnostics, Inc., Austin, Texas, USA

12:15 PM
**Adhesive Bonding of Ultra High Performance Concrete with Special Regard to Hygrothermal, Corrosive, and Freeze-Thaw Cycling Environments**
G. Wisner, S. Boehm, and K. Dilger, Technical University Braunschweig, Braunschweig, Germany; S. Freisinger, R. Krelaus, and M. Schmidt, University of Kassel, Kassel, Germany

12:45 PM  **LUNCH (On Your Own)**

2:00 PM
**Effects of Water Immersion on Building and Civil Engineering Joints and the Use of the Arrhenius Method in Predicting Adhesion Lifetime of Water-Immersed Joints**
A. T. Wolf, Dow Corning GmbH, Wiesbaden, Germany
Third Symposium on Durability of Building and Construction Sealants and Adhesives, Thursday, June 26, 2008, Session 6, continued

2:30 PM
Polymers in Cementitious Mixtures - More Than an Adhesive Between Aggregates and Cement Stone
K. Bode and A. Dimmig-Osburg, Bauhaus-University of Weimar, Weimar, Germany

3:00 PM BREAK

3:30 PM
Cleaning Silicone Residue from Glass
J. Klosowski, E. Breeze, and D. Nicastro, Engineering Diagnostics, Inc., Austin, Texas, USA

SESSION 7: WEATHERING STUDIES

Session Chair: F. Gubbels
Dow Corning
Seneffe
Belgium

4:00 PM
Durability Requirements for Substrates used in Silicone Structural Attachment
L. D. Carbary, Dow Corning Corporation, Midland, MI, USA

4:30 PM
Quantification of the Effect of Enforced Cyclic Movement and Regional Exposure Factors on the Weatherability of Construction Sealants
N. Enomoto, Sunstar Engineering, Yamanashi-Perf., Japan; A. Itou, Auto Chemical Industry, Ibargi-Pref, Japan; and K. Tanaka, Tokyo Institute of Technology, Yokohama-shi, Japan

5:00 PM
Development of Accelerated Ageing Test Specimen for Bonded FRP Systems
J. Deng, J. E. Tanner, D. J. Mukai, C. W. Dolan, and S. Pechorskaya, University of Wyoming, Laramie, Wyoming, USA

5:30 PM
An Accelerated Weathering Study
J. M. Klosowski and P. Gorman, Klosowski Scientific Inc., Bay City, MI, USA

6:00 PM
Closing Remarks
Andreas T. Wolf, Symposium Chairman
6:15 PM  SYMPOSIUM ADJOURNS
6-13-08