

---

CONTENTS

---

Volume 5, Number 1, January 1997

---

**ORIGINAL ARTICLES**

Interparticle Potential and Sedimentation Behavior of Cement  
Suspensions Review and Results from Paste 1  
*M. Yang, C.M. Neubauer, and H.M. Jennings*

Effects of Transition Zone Densification On Fiber/Cement Paste  
Bond Strength Improvement 8  
*Yin-Wen Chan and Victor C. Li*

Splitting Tension Tests to Determine Concrete Fracture Parameters  
by Peak-Load Method 18  
*Sungchul Yang, Tianxi Tang, Dan G. Zollinger, and Ashok Gurjar*

**CALENDAR** 29

---

CONTENTS

---

Volume 5, Number 2, March 1997

---

**REVIEW ARTICLE**

Recent Progress in Concrete-Polymer Composites 31  
*Yoshihiko Ohama*

**ORIGINAL ARTICLES**

Dielectric Amplification in Cement Pastes 41  
*S.J. Ford, J.-H. Hwang, J.D. Shane, R.A. Olson, G.M. Moss,  
H.M. Jennings, and T.O. Mason*

Accelerated Strength and Testing of Concrete Using Blended  
Cement 49  
*Musa R. Resheidat and Mwafag S. Ghanma*

A Pullout Test for Determining Interface Properties between Rebar  
and Concrete 57  
*W. Yeih, R. Huang, J.J. Chang, and C.C. Yang*

**CALENDAR** 67

**ORIGINAL ARTICLES**

Damping Maximum of Hardened Cement Paste (hcp) in the region of  $-90^{\circ}\text{C}$ : A Mechanical Relaxation Process **69**  
*Xuejin Xu and Max Josef Setzer*

Shear of Structural Concrete Members and Pure Mode II Testing **75**  
*Hans W. Reinhardt, Joško Ožbolt, Shilang Xu and Abebe Dinku*

Influence of the Interfacial Zone on the Chloride Diffusivity of Mortars **86**  
*A. Delagrave, J.P. Bigas, J.P. Ollivier, J. Marchand, and M. Pigeon*

Raman Spectroscopy of C-S-H, Tobermorite, and Jennite **93**  
*R. James Kirkpatrick, J.L. Yarger, Paul F. McMillan, Ping Yu, and Xiandong Cong*

Durability of Glass Fiber Reinforced Cement Composites: Effect of Silica Fume and Metakaolin **100**  
*Shashidhara Marikunte, Corina Aldea, and Surendra P. Shah*

Discussion of "The Process of Sulfate Attack on Cement Mortars" by Shen Yang, Xu Zhongzi, and Tang Mingshu **109**  
*Bryant Mather*

A Reply to Discussion by B. Mather of the Paper "The Process of Sulfate Attack on Cement Mortars" **111**  
*Shen Yang, Xu Zhongzi, and Tang Mingshu*

**CALENDAR** **113**

---

CONTENTS

---

Volume 6, Number 1, June 1997

---

**REVIEW ARTICLE**

- Interface Property Characterization and Strengthening Mechanisms  
in Fiber Reinforced Cement Based Composites 1  
*Victor C. Li and Henrik Stang*

**ORIGINAL ARTICLES**

- Controlled Rate Thermal Treatment of Reactive Powder Concretes 21  
*A. Feylessoufi, M. Crespin, P. Dion, F. Bergaya, H. Van Damme,  
and P. Richard*
- Chloride Binding Capacity of Various Hydrated Cement Paste Systems 28  
*Anik Delagrave, Jacques Marchand, Jean-Pierre Ollivier, Simone Julien,  
and Kati Hazrati*

- CALENDAR** 36

- ANNOUNCEMENTS** 37

---

CONTENTS

---

Volume 6, Number 2, August 1997

---

**ORIGINAL ARTICLES**

- Mathematical Modeling of a Concrete Surface "Skin Effect" on  
Diffusion in Chloride Contaminated Media 39  
*Carmen Andrade, Jose Miguel Díez, and Cruz Alonso*

- Chemical Characterization of Calcium Aluminate-Phenol Resin  
Composite 45  
*Game Kankanamge Dinilprem Pushpalal, Toshio Kawano,  
Tadashi Kobayashi, and Masaki Hasegawa*

- Early Strength Development and Hydration of Ordinary Portland  
Cement/Calcium Aluminate Cement Pastes 53  
*Ping Gu, James J. Beaudoin, Edmond G. Quinn, and Robert E. Myers*

- A New Generation of High Performance Concrete: Concrete with  
Autogenous Curing 59  
*Silvia Weber and Hans W. Reinhardt*

- CALENDAR** 69

- ANNOUNCEMENT** 70

**ORIGINAL ARTICLES**

- Nonlinear Transient Phenomena in Porous Media with Special  
Regard to Concrete and Durability **71**  
*B.F. Johannesson*
- Discrete Modeling of Short-Fiber Reinforcement in Cementitious  
Composites **76**  
*J.E. Bolander Jr. and S. Saito*
- Influence of Microstructural Change under Stress on the Strength-  
Related Properties of Hardened Cement Mortar and Paste **87**  
*Hiroshi Uchikawa, Shunsuke Hanehara, and Hiroshi Hirao*
- Analytical Formulas for Interfacial Transition Zone Properties **99**  
*Edward J. Garboczi and Dale P. Bentz*
- Study of the Degree of Hydration of Concrete by Means of Image  
Analysis and Chemically Bound Water **109**  
*M. Mouret, A. Boscoul, and G. Escadeillas*
- Microwave Processing of Glass-Fiber Reinforced  
Composites—Modification of the Microstructure **116**  
*Jean Pera, Jean Ambroise, and Madeleine Oriol*
- The Use of Mercury Intrusion Porosimetry or Helium Porosity to  
Predict the Moisture Transport Properties of Hardened Cement  
Paste **123**  
*G. Hedenblad*
- Microstructural Based Modelling of the Elastic Modulus of Fiber  
Reinforced Cement Composites **130**  
*Albert Ngollè and Jean Péra*
- Durability of Simulated Shredded Rubber Tire in Highly Alkaline  
Environments **138**  
*H. Huynh and D. Raghaven*
- Cement Based Cross-Ply Laminates **144**  
*A. Pivacek, G.J. Haupt, and B. Mobasher*
- CALENDAR** **153**
- ANNOUNCEMENTS** **154**
- AUTHOR INDEX TO VOLUME 5** **155**
- SUBJECT INDEX TO VOLUME 5** **156**
- AUTHOR INDEX TO VOLUME 6** **159**
- SUBJECT INDEX TO VOLUME 6** **160**
- VOLUME CONTENTS** **164**