

---

CONTENTS

---

Volume 3, Number 1, January 1996

---

**ORIGINAL ARTICLES**

- Mechanisms and Processes Leading to Changes in Time in the Properties of CFRC 1  
*A. Katz and A. Bentur*

- Observations of Microcracking in Cement Paste upon Drying and Rewetting by Environmental Scanning Electron Microscopy 14  
*K.O. Kjellsen and H.M. Jennings*

- Behavior of Cement Based Matrices Reinforced by Randomly Dispersed Microfibers 20  
*D.A. Lange, C. Ouyang, and S.P. Shah*

- Observation of the Fracture Path Development in Mortar Beam Specimens 31  
*J. Davies*

- Zeolite-Based Additives for High Alumina Cement Products 37  
*Y. Fu, J. Ding, and J.J. Beaudoin*

- CALENDAR** 43

---

CONTENTS

---

Volume 3, Number 2, March 1996

---

**ORIGINAL ARTICLES**

- Sodium Metasilicate-Modified Lightweight High Alumina Cements for Use as Geothermal Well-Cementing Materials 45  
*T. Sugama and N. Carciello*

- Testing of Concrete Under Closed-Loop Control 54  
*R. Gettu, B. Mobasher, S. Carmona, and D.C. Jansen*

**TECHNICAL NOTES**

- Deterioration of the Nitrogen BET Surface Area of Dried Cement Paste with Storage Time 72  
*R.L. Rarick, J.J. Thomas, B.J. Christensen, and H.M. Jennings*

- Effect of Carbonation on the Nitrogen BET Surface Area of Hardened Portland Cement Paste 76  
*J.J. Thomas, J. Hsieh, and H.M. Jennings*

**TECHNOLOGY TRANSFER**

- Questions to Arnon Bentur, Head, National Building Research Institute, Technion, Israel Institute of Technology, Haifa 81  
*J.P. Skalny*

- CALENDAR** 86

**ORIGINAL ARTICLES**

- The Evolution of the Microstructure in Styrene Acrylate  
Polymer-Modified Cement Pastes at the Early Stage of  
Cement Hydration 87  
*Z. Su, K. Sujata, J.M.J.M. Bijen, H.M. Jennings, and A.L.A. Fraaij*

- Mechanical Properties of Cement Pastes and Mortars at Early Ages:  
Evolution with Time and Degree of Hydration 94  
*A. Boumiz, C. Vernet, and F. Cohen Tenoudji*

- Hydration and Strength of High Performance Concrete 107  
*B. Persson*

- Design of Concrete Mixes for Minimum Brittleness 124  
*D. Lange-Kornbak and B.L. Karihaloo*

- $^{29}\text{Si}$  and  $^{17}\text{O}$  NMR Investigation of the Structure of Some Crystalline  
Calcium Silicate Hydrates 133  
*X. Cong and R.J. Kirkpatrick*

- $^{29}\text{Si}$  MAS NMR Study of the Structure of Calcium Silicate Hydrate 144  
*X. Cong and R.J. Kirkpatrick*

**TECHNOLOGY TRANSFER**

- On the Interest of Research in Building Materials 157  
*A. Capmas*

- CALENDAR** 141

---

CONTENTS

---

Volume 4, Number 1, July 1996

---

**ORIGINAL ARTICLES**

- The Process of Sulfate Attack on Cement Mortars 1  
*Y. Shen, Z. Xu, and M. Tang*

- A Three-Phase Model of the Elastic and Shrinkage Properties  
of Mortar 6  
*C.M. Neubauer, H.M. Jennings, and E.J. Garboczi*

- Thin Bonded Overlays: About the Role of Fiber Reinforcement on  
the Limitation of Their Debonding 21  
*J.L. Granju*

- Pull-Out Behavior of Corrugated Steel Fibers: Qualitative and  
Statistical Analysis 28  
*G. Chanvillard and P.-C. Aïtcin*

- CALENDAR** 42

---

CONTENTS

---

Volume 4, Number 2, September 1996

---

**ORIGINAL ARTICLES**

- Effect of Different Inorganic Salts/Alkali on Conversion-Prevention  
in High Alumina Cement Products 43  
*J. Ding, Y. Fu, and J.J. Beaudoin*

- Microhardness Testing of Cemeticious Materials 48  
*S. Igarashi, A. Bentur, and S. Mindess*

- Simulation of Cement Hydration and the Connectivity of the  
Capillary Pore Space 58  
*P. Navi and C. Pignat*

- Microstructural Analysis of Young Cement Pastes Using Impedance  
Spectroscopy During Pore Solution Exchange 68  
*G.M. Moss, B.J. Christensen, T.O. Mason, and H.M. Jennings*

- CALENDAR** 76

**ORIGINAL ARTICLES**

- Restrained Crack Widening in Mode I Crack Propagation for Mortar and Concrete 77  
*A. Turatsinze and A. Bascoul*

- Effect of Interfacial Properties on the Crack Propagation in Cementitious Composites 93  
*B. Mobasher and C.Y. Li*

- Significance of Shrinkage-Induced Clamping Pressure in Fiber-Matrix Bonding in Cementitious Composite Materials 106  
*H. Stang*

- Fracture Mechanics Parameters of Concrete: An Overview 116  
*M. Elices and J. Planas*

**REVIEW ARTICLE**

- Size Effect Aspects of Measurement of Fracture Characteristics of Quasibrittle Material 128  
*Z.P. Bažant*

**TECHNOLOGY TRANSFER**

- Questions to Dr. Carmen Andrade, Directress, Eduardo Torroja Institute for Building Sciences, Madrid, Spain 138  
*J.P. Skalny*

- CALENDAR** 141

- AUTHOR INDEX TO VOLUME 3** 142

- SUBJECT INDEX TO VOLUME 3** 143

- AUTHOR INDEX TO VOLUME 4** 146

- SUBJECT INDEX TO VOLUME 4** 147

**VOLUME CONTENTS**