

Table of Contents

BMC-1

- Structural and Continuum Aspects of Fracture in Brittle Matrix Composites
J. W. Dougill (Imperial College of Science and Technology, London, *UK*)
- A Conception of a Structural Theory of Composite Materials
R. A. Bares (Czechoslovak Academy of Sciences, Prague, *Czechoslovakia*)
- Curved Thermal Crack Growth in Self-Stressed Models of Fibre Reinforced Materials with a Brittle Matrix
K. P. Herrmann and F. Ferber (Paderborn University, Paderborn, *Federal Republic of Germany*)
- Profile Analysis of Fracture Surfaces in Multiphase Brittle Solids
S. Bengtsson, B. Johannesson and R. Warren (Chalmers University of Technology, Goteborg, *Sweden*)
- Dynamic Aspects in Fracture Mechanisms
K. M. Mianowski (Building Research Institute, Warsaw, *Poland*)
- Optimal Measurements of the Mechanical Properties of Composite Materials
P. Henrat (LEMETA, Nancy, France), A. Vautrin and G. Verchery (Ecole des Mines, St Etienne, *France*)
- Composite Ceramics: Comments on Strength Characterisation by a Fracture Mechanics Approach
R. F. Pabst (Institut fur Werkstoffwissenschaften, Stuttgart, *Federal Republic of Germany*)
- Nonlinear Behaviour of a SiSiC Composite at Elevated Temperatures and Different Loading Rates
K. Kromp (Institut fur Werkstoffwissenschaften, Stuttgart, *Federal Republic of Germany*)
- Fatigue Behaviour of SiSiC Composite Structures at Elevated Temperature
S. Lauf (Institut fur Werkstoffwissenschaften, Stuttgart, *Federal Republic of Germany*) and R. F. Pabst (Universite de Caen, *France*)
- On the Fracture Behaviour of Metal-to-Ceramic Joints
M. Turwitt, G. Ellsner and G. Petzow (Institut fur Werkstoffwissenschaften, Stuttgart, *Federal Republic of Germany*)
- Fibre-Matrix Compatibility in Silicon Nitride Composites
R. Lundberg, L. Kahlman, R. Pomps, R. Carlsson (Swedish Institute/or Silicate Research, Goteborg, *Sweden*) and R. Warren (Volvo Flygmotor AB, Trollhan, *Sweden*)
- A Method for Determining the Influence of Brittle Reaction Zones on the Strength of Fibre-Reinforced Composites
R. Pampuch, W. Slomka and J. Chlopek (Institute of Materials Science, AGH, Krakow, *Poland*)
- Microstructure and Subcritical Crack Growth in Long-Rod High-Voltage Insulators
J. Ranachowski, F. Rejmund (Polish Academy of Sciences, Warsaw, *Poland*) and Z. Librant (Institute of Technology of Electronic Materials, Warsaw, *Poland*)
- The Influence of Ageing and Fatigue on the Acoustic Properties of Solids
J. Lewandowski (Polish Academy of Sciences, Warsaw, *Poland*)
- Non Linear Mechanical Behaviour of Laminates
O. Allix, D. Gilletta, P. Ladeveze (Universite Paris, Cachan, *France*)

- Structure and Fracture in Polymer Concretes: Some Phenomenological Approaches
L. Czarnecki (Warsaw Technical University, Warsaw, *Poland*) and V. Lach (Technical University, Brno, *Czechoslovakia*)
- Fracture Mechanics Behaviour of Glass Cloth/Epoxy Composites
A. Laksimi and C. Bathias (Universite de Technologie de Compiègne, *France*)
- A Numerical Analysis of Singular Stress Fields at the Free Edge of Layered Composites
L. Anquez (Office National d'Etudes et de Recherches Aérospatiales, Chatillon, *France*)
- The Influence of Cure Conditions on the Fracture of Non-Reinforced Thermosetting Resins
C. A. C. C. Rebelo (Universidade de Coimbra, *Portugal*), A. T. Marques and P. M. S. T. de Castro (Universidade do Porto, *Portugal*)
- Relationships between Crack Formation and Energy Changes in Concrete
V. Weiss (Czech Technical University, *Czechoslovakia*) and L. Czarnecki (Warsaw Technical University, *Poland*)
- Smearred Crack Model for Concrete Using an Endochronic Material Model
I. Bojtar (Technical University Budapest, Budapest, *Hungary*)
- Energy Absorption of Steel Fibre Reinforced Concrete as a Function of Its Structure.
A. Burakiewicz (Polish Academy of Sciences, Warsaw, *Poland*)
- Experimental Investigations into the Damage of Cement Concrete with Natural Aggregates
S. Chhuy (Laboratoire Regional de l'Est Parisien a Melun, *France*), G. Cannard (Laboratoire Regional de Lyon, *France*), J. L. Robert and P. acker (Laboratoire des Fonts et Chaussées, *France*)
- Studies of Fracture and the Crack Propagation in Concrete and Polymer Concrete
M. Jaroniek and T. Niezgodzinski (Technical University of Lodz, *Poland*)
- On the Modelling of Fibre Pull-Out Forces in Composites
A. Jarzebowski (Polish Academy of Sciences, Warsaw, *Poland*)
- Cracking of a Brittle Material under Pure Shear Deformation
J. Jaworski (Polish Academy of Sciences, Warsaw, *Poland*)
- Influence of the Fibre Orientation on the Energy Absorption at Fracture of SFRC Specimens
A. M. Brandt (Polish Academy of Sciences, Warsaw, *Poland*)
- Structural Variations in Steel Fibre Reinforced Concrete and Its Implications for Material Behaviour
P. Stroeven (Delft University of Technology, Delft, *The Netherlands*) and R. Babut (Institute of Fundamental Technological Research, Warsaw, *Poland*)
- Influence of Fibre Reinforcement on Plastic Shrinkage and Cracking
P. A. Dahl (SINTEF Div. FCB, Trondheim-Nth, *Norway*)
- A Damage Model for Concrete Reinforcement Bonds in Composite Concrete Structures
J. L. Clement, J. Mazars (Universite Paris, Cachan, *France*) and A. Zaborski (Technical University of Cracow, Warsaw, *Poland*)
- Behaviour of the Fibre/Matrix Interface in SFRC during Loading
J. Potrzebowski (Polish Academy of Sciences, Warsaw, *Poland*)
- Interfacial Mechanical Properties of Cement-Fibres Composites
A. Cheik-Larbi, M. Andreani, D. Francois (Ecole Centrale des Arts et Manufacture de Paris, Chatenay Malabry, *France*) and F. Puccini (ETERNIT, *France*)

Limit Analysis for Elastic-Softening Structures: Scale and Slenderness Influence on Global Brittleness
A. Carpinteri (University of Bologna, Bologna, *Italy*)

Post-Peak Tensile Behaviour of Lightweight versus Normal-Weight Concrete
H. A. W. Cornelissen, D. A. Hordijk and H. W. Reinhardt (Delft University of Technology, Delft, *The Netherlands*)

Evaluation of the Effect of Aggregate Grading on the Cracking Behaviour of Plain Concrete
A. Moczko and G. Hola (Technical University of Wroclaw, Wroclaw, *Poland*)

Structural Effects in the Fracture of Concrete
J. Kasperkiewicz (Polish Academy of Sciences, Warsaw, *Poland*), D. Dalhuisen and P. Stroeven (Delft University of Technology, Delft, *The Netherlands*)

Simulation of Crack Propagation in Various Concrete Structures
Yu. V. Zaitsev, A. A. Ashrakov and M. B. Kazatskij (Ail-Union Polytechnical Institute, Moscow, *USSR*)

Effect of Specimen Geometry, Stress State and Structure Heterogeneity of Cementitious Composite Materials on K_{Ic}
Yu. V. Zaitsev (Ail-Union Poly technical Institute, Moscow, *USSR*) and K. L. Kovler (Moscow Civil Engineering Institute, Moscow, *USSR*)