

Journal of Composites Technology & Research

Index to Volume 14

1992

Number	Issue	Pages
1	Spring	1-60
2	Summer	61-132
3	Fall	133-200
4	Winter	201-280

A

Abu-Farsakh, G.: Bimodular material model for orthotropic composite thin plates, Spring, 31

Advanced composite materials

New test facility for measuring the coefficient of moisture expansion of advanced composite materials (Romeo, Miraldi, Ruscica, Bertoglio, Frulla, and Ruvinetti), Winter, 225

Static and dynamic Mode II strain energy release rates in toughened thermosetting composite laminates (Cairns), Spring, 37

Anisotropy

Mechanics for the growth of bridged cracks in composite materials: Part I. Basic principles (McCartney), Fall, 133

Mechanics for the growth of bridged cracks in composite materials: Part II. Applications (McCartney), Fall, 147

B

Ballistic impact: Damage tolerance of a composite sandwich with interleaved foam core (Ishai and Hiel), Fall, 155

Bertoglio, F.: *see* Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.

Bigelow, C. A.: Effects of uneven fiber spacing on thermal residual stresses in a unidirectional SCS-6/Ti-15-3 laminate, Winter, 211

Bimodular material: Bimodular material model for orthotropic composite thin plates (Abu-Farsakh), Spring, 31

Book review: *Delamination in Advanced Composites* by Newaz (Ilcwicz), Winter, 270

C

Cairns, D. S.: Static and dynamic Mode II strain energy release rates in toughened thermosetting composite laminates, Spring, 37

Carbon fiber-reinforced foam: Damage tolerance of a composite sandwich with interleaved foam core (Ishai and Hiel), Fall, 155

Cellular foam: Shear cracks in foam core sandwich panels: nondestructive testing and damage assessment (Zenkert and Vikström), Summer, 95

Chohan, H. S.: *see* Hong, S.-J., Sandhu, R. S., and Chohan, H. S.

Closed form: Simplified micromechanical equations for thermal residual stress analysis of coated fiber composites (Naik), Fall, 182

Coats, T. W.: *see* Srinivasan, K., Coats, T. W., and Hinkley, J. A.

Coefficient of moisture expansion (CME): New test facility for measuring the coefficient of moisture expansion of advanced composite materials (Romeo, Miraldi, Ruscica, Bertoglio, Frulla, and Ruvinetti), Winter, 225

Composite cylinder: Simplified micromechanical equations for thermal residual stress analysis of coated fiber composites (Naik), Fall, 182

Composites

Bimodular material model for orthotropic composite thin plates (Abu-Farsakh), Spring, 31

Detection of stress fields and delaminations in vibrating composite beams by a thermoelastic technique (Liao, Tenek, and Reifsnider), Fall, 176

Fracture mechanics analysis for various fiber/matrix interface loadings (Naik and Crews), Summer, 80

Redesign of the mixed-mode bending delamination test to reduce nonlinear effects (Reeder and Crews), Spring, 12

Tensile failure of composites: influence of interface and matrix yielding (Gao and Reifsnider), Winter, 201

Crane, R. M. and Gillespie, J. W., Jr.: Robust testing method for determination of the damping loss factor of composites, Summer, 70

Crews, J. H., Jr.: *see* Naik, R. A. and Crews, J. H., Jr. *see* Reeder, J. R. and Crews, J. H., Jr.

D

Damage tolerance: Damage tolerance of a composite sandwich with interleaved foam core (Ishai and Hiel), Fall, 155

Damping loss factor: Robust testing method for determination of the damping loss fac-

tor of composites (Crane and Gillespie), Summer, 70

Delamination

Finite element analysis of beam specimens used to measure the delamination resistance of composites (He and Evans), Winter, 235

Redesign of the mixed-mode bending delamination test to reduce nonlinear effects (Reeder and Crews), Spring, 12

Residual thermal and moisture influences on the analysis of local delaminations (O'Brien), Summer, 86

Dinorbornene spiroorthocarbonate: Effect of expanding monomer on carbon fiber-reinforced epoxy composites (Howell), Fall, 169

E

Effective strain: Prediction of matrix fatigue crack initiation in notched SCS-6/Ti-15-3 metal matrix composites (Hillberry and Johnson), Winter, 221

Elasticity

Mechanics for the growth of bridged cracks in composite materials: Part I. Basic principles (McCartney), Fall, 133

Mechanics for the growth of bridged cracks in composite materials: Part II. Applications (McCartney), Fall, 147

End-notched flexure specimens (ENF): Finite element analysis of beam specimens used to measure the delamination resistance of composites (He and Evans), Winter, 235

Epoxy: Effect of expanding monomer on carbon fiber-reinforced epoxy composites (Howell), Fall, 169

Epoxy resins: Shear failure and impact resistance in graphite fiber laminates (Srinivasan, Coats, and Hinkley), Winter, 231

Evans, A. G.: *see* He, M. Y. and Evans, A. G.

Expanding monomer: Effect of expanding monomer on carbon fiber-reinforced epoxy composites (Howell), Fall, 169

F

Fiber volume fraction: Effects of uneven fiber spacing on thermal residual stresses in a unidirectional SCS-6/Ti-15-3 laminate (Bigelow), Winter, 211

Finite element analysis

Finite element analysis of beam specimens used to measure the delamination resis-

tance of composites (He and Evans), Winter, 235

Micromechanical modelling of the transverse tensile ductility of unidirectional silicon carbide/6061 aluminum (Wisnom), Summer, 61

New horizons in composite structure (Rogers), Winter, 269

Fracture: Fracture mechanics analysis for various fiber/matrix interface loadings (Naik and Crews), Summer, 80

Fracture mechanics

Mechanics for the growth of bridged cracks in composite materials: Part I. Basic principles (McCartney), Fall, 133

Mechanics for the growth of bridged cracks in composite materials: Part II. Applications (McCartney), Fall, 147

New horizons in composite structure (Rogers), Winter, 269

Free surface: Effects of uneven fiber spacing on thermal residual stresses in a unidirectional SCS-6/Ti-15-3 laminate (Bigelow), Winter, 211

Frulla, G.: *see* Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.

G

Gao, Z. and Reifsnider, K. L.: Tensile failure of composites: influence of interface and matrix yielding, Winter, 201

Gillespie, J. W., Jr.: *see* Crane, R. M. and Gillespie, J. W., Jr.

Glass/epoxy: Robust testing method for determination of the damping loss factor of composites (Crane and Gillespie), Summer, 70

Grande, D. L.: High speed commercial transport program (HSCT) structures and materials, Spring, 54

Graphite composites: Shear failure and impact resistance in graphite fiber laminates (Srinivasan, Coats, and Hinkley), Winter, 231

Graphite/epoxy: Robust testing method for determination of the damping loss factor of composites (Crane and Gillespie), Summer, 70

Guest commentary

High speed commercial transport (HSCT) structures and materials (Grande), Spring, 54

New horizons in composite structure (Rogers), Winter, 269

H

He, M. Y. and Evans, A. G.: Finite element analysis of beam specimens used to measure the delamination resistance of composites, Winter, 235

Hiel, C.: *see* Ishai, O. and Hiel, C.

High speed commercial transport (HSCT): High speed commercial transport (HSCT) structures and materials (Grande), Spring, 54

Hillberry, B. M. and Johnson, W. S.: Prediction of matrix fatigue crack initiation in notched SCS-6/Ti-15-3 metal matrix composites, Winter, 221

Hinkley, J. A.: *see* Srinivasan, K., Coats, T. W., and Hinkley, J. A.

Hong, S.-J., Sandhu, R. S., and Chohan, H. S.: Consistent shear constitutive relations for a laminated plate, Spring, 20

Howell, B. F.: Effect of expanding monomer on carbon fiber-reinforced epoxy composites, Fall, 169

Hygroscopic stress: Residual thermal and moisture influences on the analysis of local delaminations (O'Brien), Summer, 86

I-J

Icewicz, L. B.: Review of *Delamination in Advanced Composites* by Newaz, Winter, 270

Impact damage: Shear failure and impact resistance in graphite fiber laminates (Srinivasan, Coats, and Hinkley), Winter, 231

Impact velocity: Damage tolerance of a composite sandwich with interleaved foam core (Ishai and Hiel), Fall, 155

Interface

Fracture mechanics analysis for various fiber/matrix interface loadings (Naik and Crews), Summer, 80

Tensile failure of composites: influence of interface and matrix yielding (Gao and Reifsnider), Winter, 201

Interferometry: Effect of expanding monomer on carbon fiber-reinforced epoxy composites (Howell), Fall, 169

Interlaminar fracture: Static and dynamic Mode II strain energy release rates in toughened thermosetting composite laminates (Cairns), Spring, 37

Ishai, O. and Hiel, C.: Damage tolerance of a composite sandwich with interleaved foam core, Fall, 155

Johnson, W. S.: *see* Hillberry, B. M. and Johnson, W. S.

L

Laminates

Consistent shear constitutive relations for a laminated plate (Hong, Sandhu, and Chohan), Spring, 20

Effects of uneven fiber spacing on thermal residual stresses in a unidirectional SCS-6/Ti-15-3 laminate (Bigelow), Winter, 211

Liao, K., Tenek, L. H., and Reifsnider, K. L.: Detection of stress fields and delaminations in vibrating composite beams by a thermoelastic technique, Fall, 176

M

Mall, S.: *see* Robertson, D. D. and Mall, S.

Material properties: Consistent shear constitutive relations for a laminated plate (Hong, Sandhu, and Chohan), Spring, 20

Matrix: Tensile failure of composites: influence of interface and matrix yielding (Gao and Reifsnider), Winter, 201

McCartney, L. N.:

Mechanics for the growth of bridged cracks in composite materials: Part I. Basic principles, Fall, 133

Mechanics for the growth of bridged cracks in composite materials: Part II. Applications, Fall, 147

Metal matrix composites

Fiber-matrix interphase effects upon transverse behavior in metal-matrix composites (Robertson and Mall), Spring, 3

Micromechanical modelling of the transverse tensile ductility of unidirectional silicon carbide/6061 aluminum (Wisnom), Summer, 61

Prediction of matrix fatigue crack initiation in notched SCS-6/Ti-15-3 metal matrix composites (Hillberry and Johnson), Winter, 221

Simplified micromechanical equations for thermal residual stress analysis of coated fiber composites (Naik), Fall, 182

Micromechanical modelling: Micromechanical modelling of the transverse tensile ductility of unidirectional silicon carbide/6061 aluminum (Wisnom), Summer, 61

Micromechanics

Effects of uneven fiber spacing on thermal residual stresses in a unidirectional SCS-6/Ti-15-3 laminate (Bigelow), Winter, 211

Fiber-matrix interphase effects upon transverse behavior in metal-matrix composites (Robertson and Mall), Spring, 3

Simplified micromechanical equations for thermal residual stress analysis of coated fiber composites (Naik), Fall, 182

Miraldi, E.: *see* Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.

Mixed-mode bending test: Redesign of the mixed-mode bending delamination test to reduce nonlinear effects (Reeder and Crews), Spring, 12

Modelling: Bimodular material model for orthotropic composite thin plates (Abu-Farsakh), Spring, 31

Moisture: Residual thermal and moisture influences on the analysis of local delaminations (O'Brien), Summer, 86

N-O

Naik, R. A.

and Crews, J. H., Jr.: Fracture mechanics analysis for various fiber/matrix interface loadings, Summer, 80

Simplified micromechanical equations for thermal residual stress analysis of coated fiber composites, Fall, 182

Nondestructive testing: Shear cracks in foam core sandwich panels: nondestructive testing and damage assessment (Zenkert and Vikström), Summer, 95

Nonlinear analysis: Redesign of the mixed-mode bending delamination test to reduce nonlinear effects (Reeder and Crews), Spring, 12

O'Brien, T. K.: Residual thermal and moisture influences on the analysis of local delaminations, Summer, 86

R

Reeder, J. R. and Crews, J. H., Jr.: Redesign of the mixed-mode bending delamination test to reduce nonlinear effects, Spring, 12

Reifsnider, K. L.:

see Gao, Z. and Reifsnider, K. L.

see Liao, K., Tenek, L. H., and Reifsnider, K. L.

Residual thermal stress

Prediction of matrix fatigue crack initiation in notched SCS-6/Ti-15-3 metal matrix composites (Hillberry and Johnson), Winter, 221

Residual thermal and moisture influences on the analysis of local delaminations (O'Brien), Summer, 86

Robertson, D. D. and Mall, S.: Fiber-matrix interphase effects upon transverse behavior in metal-matrix composites, Spring, 3

Rogers, C. W.: New horizons in composite structure, Winter, 269

Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.: New test facility for measuring the coefficient of moisture expansion of advanced composite materials, Winter, 225

Ruscica, G.: *see* Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.

Ruvinetti, G.: *see* Romeo, G., Miraldi, E., Ruscica, G., Bertoglio, F., Frulla, G., and Ruvinetti, G.

S

Sandhu, R. S.: *see* Hong, S.-J., Sandhu, R. S., and Chohan, H. S.

Sandwich construction: Shear cracks in foam core sandwich panels: nondestructive testing and damage assessment (Zenkert and Vikström), Summer, 95

Silicon carbide/aluminum: Micromechanical modelling of the transverse tensile ductility of unidirectional silicon carbide/6061 aluminum (Wisnom), Summer, 61

SPATE (stress pattern analysis by thermal emission): Detection of stress fields and delaminations in vibrating composite beams

by a thermoelastic technique (Liao, Tenek, and Reifsnider), Fall, 176

Srinivasan, K., Coats, T. W., and Hinkley, J. A.: Shear failure and impact resistance in graphite fiber laminates, Winter, 231

Strain energy release rate

Residual thermal and moisture influences on the analysis of local delaminations (O'Brien), Summer, 86

Static and dynamic Mode II strain energy release rates in toughened thermosetting composite laminates (Cairns), Spring, 37

Stress intensity factors: Fracture mechanics analysis for various fiber/matrix interface loadings (Naik and Crews), Summer, 80

T

Tenek, L. H.: *see* Liao, K., Tenek, L. H., and Reifsnider, K. L.

Test facilities: New test facility for measuring the coefficient of moisture expansion of advanced composite materials (Romeo, Miraldi, Ruscica, Bertoglio, Frulla, and Ruvinetti), Winter, 225

Thermal stresses: Fiber-matrix interphase effects upon transverse behavior in metal-matrix composites (Robertson and Mall), Spring, 3

Thermoelastic technique: Detection of stress fields and delaminations in vibrating composite beams by a thermoelastic technique (Liao, Tenek, and Reifsnider), Fall, 176

Thermography: Shear cracks in foam core sandwich panels: nondestructive testing and

damage assessment (Zenkert and Vikström), Summer, 95

Thermoplastic resins: Shear failure and impact resistance in graphite fiber laminates (Srinivasan, Coats, and Hinkley), Winter, 231

Transverse modulus: Fiber-matrix interphase effects upon transverse behavior in metal-matrix composites (Robertson and Mall), Spring, 3

Transverse shear: Consistent shear constitutive relations for a laminated plate (Hong, Sandhu, and Chohan), Spring, 20

U-Z

Unidirectional composites

Mechanics for the growth of bridged cracks in composite materials: Part I. Basic principles (McCartney), Fall, 133

Mechanics for the growth of bridged cracks in composite materials: Part II. Applications (McCartney), Fall, 147

Vikström, M.: *see* Zenkert, D. and Vikström, M.

Wisnom, M. R.: Micromechanical modelling of the transverse tensile ductility of unidirectional silicon carbide/6061 aluminum, Summer, 61

Yielding: Tensile failure of composites: influence of interface and matrix yielding (Gao and Reifsnider), Winter, 201

Zenkert, D. and Vikström, M.: Shear cracks in foam core sandwich panels: nondestructive testing and damage assessment, Summer, 95