

Table of Contents

MMCs

- PREPARATION OF AL BASED COMPOSITE REINFORCED WITH FINE DROSS PARTICLES,15*
V. M. Kevorkijan
- A LIFE PREDICTION MODEL FOR METAL MATRIX COMPOSITES,23*
J. Ahmad, U. Santhosh, and S. Kinney
- A HIGH-DAMPING MAGNESIUM MATRIX TO LIMIT FATIGUE IN COMPOSITES,33*
C. Mayencourt and R. Schaller

Sensors I

- EMBEDDED MICROELECTROMECHANICAL SYSTEMS (MEMS) FOR MEASURING STRAIN IN COMPOSITES,44*
C. Hautamaki, S. Zurn, S. Mantell, and D. Polla
- DEVELOPMENT OF SMART LAYER FOR BUILT-IN DIAGNOSTICS FOR COMPOSITE STRUCTURES, ...55*
M. Lin and F.-K. Chang
- STRUCTURAL INTEGRITY OF QUASI-ISOTROPIC COMPOSITE LAMINATES WITH EMBEDDED OPTICAL FIBERS, 63*
A. Skontorp

Applications

- COMPOSITE DATABASE PROTOTYPE FOR MIL-HDBK-17 AND GENERAL ARMY APPLICATIONS, . 83*
C. H. Newton, J. W. Gillespie, Jr., B. K. Fink, G. L. Hagnauer, C. Williams, H Telegada, E. T. Camponeschi, and D. W. Honaker
- DESIGN AND FABRICATION OF AN ADVANCED COMPOSITE ADAPTOR, 93*
A. Hou and K. Gramoll

Liquid Molding I

- ADHESION OF GLASS FIBERS TO FAST REACTING MATRICES DURING LIQUID MOLDING,104*
E. K. Drown and L. T. Drzal
- AN INVESTIGATION OF THE EFFECTS OF FIBER VOLUME FRACTION ON THE IMPACT PROPERTIES OF FIBER REINFORCED COMPOSITE LAMINATED PLATES,116*
L. A. Ruhala and R. S. Engel

Reinforcement Characterization

<i>STRAIN RATE AND TEMPERATURE EFFECTS IN POLYMERIC MATRICES FOR COMPOSITE MATERIALS,</i>	128
F. Sun and K. L. Reifsnider	
<i>EFFECT OF LOCAL MATERIAL VARIATIONS ON TAPERED SANDWICH STRUCTURES,</i>	138
M. J. King and J. Chen	
<i>VISUALIZATION AND QUANTIFICATION OF FORCED IN-PLANE FLOW THROUGH DEFORMABLE POROUS MEDIA,</i>	151
H. L. Friedman, V. Gusev, A. Neimark, D. R. Salem, and R. S. Parnas	

Ceramics

<i>THE DYNAMIC RESPONSE OF REACTIVE INFILTRATION OF POROUS CERAMIC PREFORM BY MOLTEN ALUMINUM ALLOY,</i>	159
V. M. Kevorkijan	
<i>PREPARATION AND PROPERTIES OF UNIDIRECTIONALLY SOLIDIFIED ZRB₂-LAB₆ EUTECTIC COMPOSITE,</i>	168
L Zhang, W. Zhou, C. Chen, L Cheng, and Y Xu	
<i>THE EFFECT OF DAMAGE MORPHOLOGY ON THE RESIDUAL STRENGTH DEGRADATION OF SCS-6/Ti-15-3,</i>	173
J. R. Calcaterra and S. Mall	

Fibrous Composites

<i>MECHANICAL PROPERTIES OF KNITTED FABRIC COMPOSITES,</i>	185
H. Hamada, A. Nakai, K. Sugimoto, N. Takeda, S. Gotoh, and T. Ishida	
<i>FAILURE OF STOCHASTIC FIBROUS NETWORKS,</i>	194
A. M. Sastry, C. W. Wang, and X. Cheng	

Liquid Molding II

<i>AN INTELLIGENT MODEL-PREDICTIVE CONTROL FRAMEWORK FOR MOLD FILLING DURING RTM,</i>	205
P. D. Lafferty and R. Pitchumani	
<i>VERIFICATION OF A SIMULATION MODEL FOR RESIN FILM INFUSION OF COMPLEX SHAPED COMPOSITE STRUCTURES,</i>	218
A. C. Caba, D. Rattazzi, R. Batra, and A. C. Loos	
<i>ACTIVE CONTROL OF RESIN INJECTION FOR THE RESIN TRANSFER MOLDING PROCESS,</i>	232
S. Bickerton, H. Stadtfeld, K. V. Steiner, and S. G. Advani	

Preforms

<i>PERMEABILITY MEASUREMENTS OF FIBER PREFORMS FOR AEROSPACE APPLICATIONS,</i>	246
K. Han, B. Lee, and B. Rice	
<i>DETERMINATION OF THE TRANSVERSE PERMEABILITY OF A FIBER PREFORM,</i>	256
W. O. Ballata, S. M. Walsh, and S. Advani	
<i>AN INVESTIGATION OF VOID FORMATION DYNAMICS IN FIBER PREFORM MATERIALS,</i>	271
R. C. Peterson and F. R. Phelan, Jr.	
<i>CHARACTERIZATION OF A SINK TERM IN WOVEN PREFORM IMPREGNATION,</i>	284
J. R. Slade and S. Advani	

Viscoelasticity

<i>VISCOELASTIC PROPERTIES OF A RESIN COMMONLY USED IN THE SINGLE FIBER FRAGMENTATION TEST</i> ,	294
D. Hunston, G. Holmes, R. Peterson	
<i>ANALYTICAL SIMULATIONS OF OPTIMUM ANISOTROPIC LINEAR VISCOELASTIC DAMPING PROPERTIES</i> ,	305
C. E. Beldica and H. H. Hilton	
<i>MICRO & MACROSCOPIC CHARACTERIZATIONS ON VISCOELASTIC FRACTURE OF RESIN BASED FIBER COMPOSITES</i> ,	324
S. Y. Zhang	
<i>USING A LAPLACE TRANSFORM METHOD TO PREDICT THE CREEP RESPONSE OF LINEAR VISCOELASTIC GRAPHITE/EPOXY COMPOSITES IN A THREE-DIMENSIONAL SPACE STATE</i> ,	340
A. Rivera-Dominguez and W. Jordan	
<i>DYNAMIC TRANSVERSE TENSILE BEHAVIOR OF A CARBON/EPOXY COMPOSITE: MONITORING CRACK INITIATION AND PROPAGATION</i> ,	354
L. G. Melin and L. E. Asp	

Environmental I

<i>EFFECTS OF PROPERTY GRADIENTS ON NON-UNIFORM MOISTURE ABSORPTION IN THE FIBER/MATRIX INTERPHASE</i> ,	371
T. Wang, T. Bogetti, and J. W. Gillespie, Jr.	
<i>MODELING OF ANOMALOUS HYGROTHERMAL EFFECTS IN POLYMER MATRIX COMPOSITE LAMINATES</i> ,	390
S. Roy	
<i>THE EFFECT OF SAMPLE PREPARATION AND SILANE COUPLING AGENT CHAIN STRUCTURE ON THE DURABILITY OF E-GLASS FIBERS</i> ,	400
G. A. Holmes, J. F. Cheng, R. C. Peterson, G. Mao	
<i>MODELING THE EFFECTS OF HIGH TEMPERATURE EXPOSURE ON THE MECHANICAL PROPERTIES OF GRAPHITE/EPOXY COMPOSITES</i> ,	416
L. K. Crews and H. L. N. McManus	
<i>PRELIMINARY EVALUATION OF THE USE OF ELEVATED PRESSURE TO ACCELERATE THERMO-OXIDATIVE AGING IN COMPOSITES</i> ,	427
T. Tsotsis, S. Keller, J. Bardis, and J. Bish	

Joints

<i>COMPUTATIONAL MODELING OF COMPOSITE INTEGRAL FIT JOINTS</i> ,	437
D. E. Lee and H. T. Hahn	
<i>PROGRESSIVE FAILURE ANALYSIS OF ADHESIVE BONDED JOINTS WITH LAMINATED COMPOSITE ADHERENDS</i> ,	455
A. E. Bogdanovich and S. P. Yushmanov	
<i>OPTIMIZATION OF HEAT GENERATION IN INDUCTION BONDING USING METAL MESH SUSCEPTORS</i> ,	468
J. Firko, S. Yarlagadda, B. K. Fink, J. W. Gillespie, Jr.	
<i>INVESTIGATION INTO A NOVEL JOINING TECHNIQUE FOR COMPOSITE MARINE APPLICATIONS</i> ,	481
S. Mouring	
<i>EFFECT OF LAY-UP AND CONSTRAINT ON TENSILE NOTCH STRENGTH</i> ,	489
G. A. Etheridge, W. S. Johnson, and S. R. Reeve	

Energy Absorption

<i>ENERGY ABSORPTION CAPACITY OF COMPOSITES,</i>	505
M. R. Schultz and M. W. Hyer	
<i>DELAMINATION MODELING OF COMPOSITES FOR IMPROVED CRASH ANALYSIS,</i>	519
D. C. Fleming	
<i>DYNAMIC RESPONSE OF ENERGY-DISSIPATING TENSILE COMPONENT MEMBERS UNDER IMPULSIVE LOADING,</i>	534
D. S. Dancila and E. A. Armanios	
<i>AUTOMOTIVE COMPOSITES CONSORTIUM GENERIC TUBE CRUSH PROGRAM: DYNAMIC CRUSH TESTS OF RESIN TRANSFER MOLDED TUBES,</i>	557
A. L. Browne	
<i>AUTOMOTIVE COMPOSITES CONSORTIUM GENERIC TUBE CRUSH PROGRAM: DYNAMIC CRUSH TESTS OF SRIM TUBES,</i>	572
N. L. Johnson	

Processes

<i>THE AUTOMATED TOW-PLACEMENT PROCESS: OPTIMIZATION AND QUALITY CONTROL,</i>	585
D. Heider and J. W. Gillespie, Jr.	
<i>MICROWAVE-ACCELERATED CURING OF THICK COMPOSITE LAMINATES,</i>	595
E. T. Thostenson and T.-W. Chou	
<i>APPLICATION OF INDUCTION HEATING TO ACCELERATE CURING OF ADHESIVES IN BONDED JOINTS,</i>	605
T. E. Tay, S. Yarlagadda, J. W. Gillespie, Jr., B. K. Fink, and S. H. McKnight	
<i>AUTOMATED VARIABLE FREQUENCY MICROWAVE PROCESSING OF GRAPHITE/EPOXY COMPOSITE IN A SINGLE-MODE CAVITY,</i>	619
Y. Qiu and M. C. Hawley	
<i>MICROWAVE PULTRUSION OF GRAPHITE/EPOXY COMPOSITES,</i>	630
A. C. Smith, M. C. Hawley, and A. M. McMillan	

Fracture Toughness

<i>MODE II INTERLAMINAR FRACTURE BEHAVIOR OF FIBER REINFORCED POLYAMIDE COMPOSITES UNDER STATIC AND DYNAMIC LOADING CONDITIONS,</i>	643
M. Todo, T. Nakamura, and K Takahashi	
<i>CALCULATION OF MODE-SEPARATED ENERGY RELEASE RATES DURING DELAMINATION GROWTH,</i>	654
J. Schon and B. Andersson	
<i>INTERACTION BETWEEN A DELAMINATION CRACK AND A MATRIX CRACK,</i>	676
J. Schon and B. Andersson	
<i>DETERMINATION OF MODE-I FRACTURE TOUGHNESS OF ANGLE-PLY COMPOSITES USING THE DOUBLE CANTILEVER BEAM TEST METHOD,</i>	711
C. L. Nailai and D. F. Adams	

Sensors II

<i>VIRTUAL SENSOR SIMULATION STUDY OF FLOW DURING RESIN TRANSFER MOLDING PROCESS,</i>	744
S. R. M. Kueh, S. G. Advani, and R. S. Parnas	
<i>A FIBER OPTIC SENSOR FOR COMPOSITE CURE MONITORING,</i>	761
J. L. Lenhart, J. VonZanten, J. P. Dunkers, C. G. Zimba, S. K. Pollack, R. S. Parnas	
<i>MULTIVARIATE OPTICAL COMPUTATION FOR PREDICTIVE SPECTROSCOPY,</i>	771
M. L. Myrick, M. P. Nelson, J. F. Aust, J. A. Dobrowolski, P. G. Verly	

Cure Deformations

<i>FIBRE WAVINESS GENERATION AND MEASUREMENT AND ITS EFFECT ON COMPRESSIVE STRENGTH,</i>	788
M. R. Wisnom and J. W. Atkinson	
<i>EXPERIMENTAL INVESTIGATION FOR VALIDATION OF THE THERMO-MECHINCAL RESPONSE OF VINYL ESTER RESIN,</i>	802
F. Flores, T. A. Bogetti, and J. W. Gillespie, Jr.	
<i>THREE DIMENSIONAL AND MULTI-DOMAIN CURE SIMULATION OF VARTM COMPOSITE STRUCTURES,</i>	815
X. Huang, T. Bogetti, and J. W. Gillespie, Jr.	
<i>POST-CURE SHRINKAGE IN HUBBED FULL FACE FLANGE,</i>	827
J. F. Oosthuizen and M. A. Stone	

DoD Applications

<i>RESEARCH IN COMPOSITES FOR MARINE/NAVAL STRUCTURES,</i>	837
Y. D. S. Rajapakse	
<i>NAVAL APPLICATIONS OF COMPOSITES,</i>	838
J. Kelly	
<i>COMPOSITE MATERIALS FOR FUTURE SHIP APPLICATIONS,</i>	839
G. Camponeschi	
<i>CURRENT US AIR FORCE INVESTMENTS IN NON-METALLIC STRUCTURES,</i>	840
J. Mistretta	
<i>U. S. ARMY ELECTRIC ARMAMENT PROGRAM,</i>	841
E. M. Schmidt and M. Smith	

Compression

<i>RESIDUAL COMPRESSIVE STRENGTH OF QUASI-ISOTROPIC CFRP LAMINATES SUBJECTED TO LOW-VELOCITY IMPACT,</i>	842
M. V. Hosur, C. R. L. Murthy, and T. S. Ramamurthy	
<i>BUCKLING AND POSTBUCKLING ANALYSIS OF A STIFFENED COMPOSITE PANEL WITH SKIN-STIFFENER DEBOND,</i>	854
O. Park, B. V. Sankar, and R. T. Haftka	

Mechanics I

<i>A SIMPLE CLOSED-FORM SOLUTION OF BENDING STIFFNESS FOR LAMINATED COMPOSITE TUBES,</i>	868
W. S. Chan and K. C. Demirhan	
<i>INFLUENCE OF MATERIAL ORTHOTROPY ON THE RESPONSE OF ELLIPTICAL COMPOSITE CYLINDERS TO INTERNAL PRESSURE,</i>	878
J. M. McMurray and M. W. Hyer	
<i>RESPONSE OF SEGMENTED-STIFFNESS COMPOSITE CYLINDERS TO INTERNAL PRESSURE,</i>	895
J. C. Riddick and M. W. Hyer	
<i>SIMPLIFIED ANALYSIS OF EMBEDDED PLY DROP-OFFS IN COMPOSITE AND SANDWICH LAMINATES,</i>	907
F. Mortensen and O. Thomsen	

Micromechanics

<i>THE ROLE OF THERMAL PROCESSING STRESSES IN THE DAMAGE PROGRESSION OF DISCONTINUOUS RANDOM FIBER COMPOSITES,</i>	923
T. Eason and O. O. Ochoa	
<i>A UNIFIED MICROMECHANICAL MODEL FOR ESTIMATING ELASTIC, ELASTO-PLASTIC, AND STRENGTH BEHAVIORS OF KNITTED FABRIC REINFORCED COMPOSITES,</i>	939
Z. M. Huang, S. Ramakrishna, and A. A. O. Tay	
<i>MICROMECHANICS OF SHORT FIBER POLYMER COMPOSITES,</i>	950
M. L. Mehan and L. S. Schadler	
<i>A TENSILE COMPLIANCE MODEL FOR ALIGNED, LONG FIBER ARRAY (ALFA) COMPOSITE MATERIALS,</i>	961
J. Burns	

Environmental II

<i>DEGRADATION BEHAVIOR OF BRAIDED COMPOSITES UNDER HOT WATER,</i>	972
H. Hamada, A. Nakai, S. Ikegaki, N. Takeda	
<i>BENDING-INDUCED DAMAGES IN S2 GLASS TOUGHENED EPOXY COMPOSITES AT ROOM AND ELEVATED TEMPERATURES,</i>	981
C. K. Cheung, B. M. Liaw, F. Delale, A. D. Walser, and B. B. Raju	
<i>INVESTIGATION OF THE ENVIRONMENTAL DURABILITY OF GLASS FIBER THERMOSETTING COMPOSITES AT THE CONSTITUENT LEVEL: A NEW APPROACH,</i>	991
A. Paesano and G. R. Palmese	
<i>COUPLED MODELING OF MOISTURE AND TEMPERATURE EFFECTS TO PREDICT DEFORMATION,</i>	1003
J. F. Newill, C. P. R. Hoppel, and M. S. Berman	

Skin Stiffener Interaction

<i>DEBONDING IN COMPOSITE SKIN/STRINGER CONFIGURATIONS UNDER MULTI-AXIAL LOADING,</i>	1014
M. K. Cvitovich, R. Krueger, T. K. O'Brien, P. J. Minguet	
<i>FACTORS IN THE COMPRESSIVE STRENGTH OF COMPOSITE SANDWICH PANELS WITH THIN FACESHEETS,</i>	1049
P. A. Lagace and L. Marmorini	
<i>FAILURE CRITERION FOR THE SKIN-STIFFENER INTERFACE IN COMPOSITE AIRCRAFT PANELS,</i>	1064
J. C. F. N. van Rijn	
<i>SKIN-STIFFENER INTERFACE BEHAVIOR IN COMPOSITE PLATES AND SHELLS,</i>	1094
M. E. Robeson	

Response

<i>DYNAMIC RESPONSE OF IMPACT DAMAGED RANDOM FIBER AUTOMOTIVE COMPOSITES,</i>	1105
R. Sadasivam, J. Cherng, and P. K. Mallick	
<i>IMPACT RESISTANT CARBON FIBRE COMPOSITE WITH TENSIONED KEVLAR OVERWIND,</i>	1119
M. R. Wisnom	
<i>CONSITANCY EVALUATION OF SECONDARY AIRPLANE STRUCTURE PREPREG SYSTEMS,</i>	1124
F. U. Buehler, C. J. Martin, J. C. Seferis, and S. Zeng	
<i>A FRACTAL MODEL FOR INTIMATE CONTACT DURING THERMOPLASTIC FUSION BONDING,</i> ...	1134
F. Yang and R. Pitchumani	

Fatigue I

<i>FATIGUE AND FRACTURE OF FIBER COMPOSITES UNDER COMBINED INTERLAMINAR STRESSES,</i>	1147
S. J. DeTeresa, D. C. Freeman, and S. E. Groves	
<i>RESPONSE OF CARBON/EPOXY WOVEN COMPOSITE UNDER MODE II QUASI-STATIC AND FATIGUE LOADING,</i>	1156
D. Gentile, N. Bonora, G. B. Broggiato, G. M. Newaz, J. Ahmad	
<i>EFFECT OF TEMPERATURE ON THE FATIGUE LIFE OF A QUASI-ISOTROPIC GR/EP LAMINATE,</i>	1162
K. R. Uleck, J. S. Harris, and A. J. Vizzini	

Multifunctional Composites

<i>ACCELERATED STRESS TESTING AND HEALTH MONITORING OF LAMINATED CIRCUIT CARD ASSEMBLIES USING PIEZOELECTRIC ACTUATORS AND SENSORS,</i>	1170
C. S. Sealing and A. Dasgupta	
<i>BI-DIRECTIONALLY TEMPERATURE RESPONSE AND RESPONSIVE POWER ON SHAPE MEMORY COMPOSITE WITH EMBEDDED TiNi ALLOY AS EFFECTORS,</i>	1181
H. Yoshida, K. Heshiki, O. Byon, K. Yasumoto, T. Ogasa	
<i>DELAMINATION MODELING AND DETECTION IN SMART COMPOSITE PLATES,</i>	1187
A. Chattopadhyay, C. Nam, and D Dragomir-Daescu	

Failure I

- FRACTURE OF MMC BY MODELING INTERFACE USING GAP ELEMENTS,1197***
V. R. Challa and N. T. Sivaneri
- THE EFFECT OF MATERIAL NONLINEARITY ON PROGRESSIVE DAMAGE OF COMPOSITE LAMINATE WITH A CIRCULAR HOLE SUBJECTED TO TENSILE LOADING,1216***
L. Zhengneng, X. Chengdong, H. Qingzhi
- FAILURE MECHANISMS IN COMPRESSION-LOADED COMPOSITE LAMINATES CONTAINING OPEN AND FILLED HOLES,1223***
A. J. Sawicki and P. J. Minguet
- FAILURE PREDICTION OF WOVEN FABRIC COMPOSITES AFTER DEFORMATIONS INDUCED BY FORMING,1243***
T. Vu-Khanh and B. Liu

Infrastructure

- MODELING THE MECHANICAL INTERACTION BETWEEN FRP BARS AND CONCRETE, 1257***
J. Guo and J. V. Cox
- THE EVOLUTION OF DEBONDING IN A SINGLE FIBER COMPOSITE FRAGMENTATION TEST, 1268***
R. C. Peterson, G. A. Holmes, D. L. Hunston, and W. G. McDonough
- ANALYSIS OF THE RADIAL ELASTIC INTERACTION BETWEEN SLENDER REINFORCING ELEMENTS AND A MATRIX, 1284***
H. Yu and J. V Cox
- FLEXURE OF CONCRETE WITH CHOPPED GR/EP PREPREG FIBERS, 1297***
D. W. Jensen and J. G. Meade

Mechanics II

- DETERMINATION OF STRESS INTENSITY FACTORS IN CRACKED BONDED JOINTS, 1321***
F. E. Penado
- THE EFFECT OF PLY-CRACKING ON THE EFFECTIVE ELASTIC CONSTANTS OF BIDIRECTIONAL LAMINATED COMPOSITES, 1334***
J. M. Whitney
- A MODIFIED CRACK SURFACE DISPLACEMENT METHOD FOR COMPUTING COMPLEX STRESS INTENSITIES,1356***
A. Abatan and H. Hu
- POSTBUCKLING BEHAVIOR OF SANDWICH PLATES,1367***
B. Hao, C. Cho, and S. W. Lee
- ON INTERLAMINAR STRESSES IN COMPOSITE NOTCHED AND UN-NOTCHED LAMINATES,1374***
T. Nyman and M. Friberg

Space Applications

<i>HIGH PERFORMANCE COMPOSITES FOR SPACECRAFT THERMAL MANAGEMENT APPLICATIONS,</i>	1387
E. Silverman	
<i>DESIGN OF JOINTS IN COMPOSITE COMPONENTS FOR SPACECRAFT,</i>	1394
T. Magaldi and J. W. Goodman	
<i>CARBON-CARBON COMPOSITE RADIATOR DEVELOPMENT FOR THE EO-1 SPACECRAFT,</i>	1400
W. Vaughn, E. Shinn, and J. Wright	
<i>WING STRUCTURE DESIGN AND MANUFACTURING ISSUES FOR THE X-34 REUSABLE LAUNCH VEHICLE,</i>	1416
T. Dragone and P. Hipp	
<i>COMPOSITE STRUCTURES ON THE DELTA LAUNCH VEHICLES,</i>	1437
M. J. Robinson	

Manufacturing

<i>CONSOLIDATION OF COMPOSITE PREFORMS BASED ON COMMINGLED YARNS,</i>	1454
N. Bernet, V. Michaud, P.-E. Bourban and J.-A. E. Manson	
<i>DEVELOPMENT OF MATERIAL QUALITY DURING THE AUTOMATED TOW PLACEMENT PROCESS,</i>	1467
J. J. Tierney, S. Quirico, F. Eduljee, and J. W. Gillespie, Jr.	
<i>MANUFACTURE AND TESTING OF MULTI-LAYER POLYURETHANE AND EPOXY COMPOSITES,</i>	1480
G. P. McKnight, K. R. Bernetich, J. W. Gillespie, Jr., R. Crane	
<i>IMPROVED DAMAGE TOLERANT ARMOR VIA STITCHING AND CO-INJECTION RESIN TRANSFER MOLDING,</i>	1491
K. R. Bernetich, J. W. Gillespie, Jr. G. McKnight, B. K. Fink, T. Pike	
<i>A PROCESS FOR PRESTAGING THERMOSETTING TOWREG,</i>	1498
R. Beck and J. Colton	

Processing

<i>ESTABLISHING WASTE REDUCTION BENCHMARKS AND GOOD MANUFACTURING PRACTICE FOR OPEN MOLD LAMINATING,</i>	1528
D. R. Hillis	
<i>ANALYSIS OF SHRINKAGE POROSITY IN MMC CASTING-I: INFILTRATION PHENOMENA,</i>	1543
O. J. Ilegbusi and J. Yang	
<i>KINETICS OF REACTION-BONDED SIC PROCESS,</i>	1552
J. Yang and O. J. Ilegbusi	
<i>OPTIMIZATION OF LAMINATED OBJECT MANUFACTURING PROCESS PARAMETERS FOR COMPOSITE MATERIALS,</i>	1560
S. S. Park, J. H. Park, M. K. Kang, and H. T. Hahn	
<i>PROCESSABILITY AND PROPERTIES OF COMPOSITES FOR COMPRESSION FLOW MOULDING,</i>	1570
R. Tornqvist, P. Sunderland, and J.-A. Manson	

Fatigue II

- FATIGUE INDUCED DELAMINATION IN TITANIUM-GRAPHITE HYBRID LAMINATES*,1581**
D. A. Burianek and S. M. Spearing
- COMPOSITE LAMINATE/STRUCTURAL FATIGUE - INCLUSIVE COMPUTATIONAL SIMULATION*, ..1599**
L. Minnetyan and C. C. Chamis
- EFFECT OF LOADING PATH ON MECHANICAL RESPONSES OF A GLASS FABRIC COMPOSITE AT LOW CYCLIC FATIGUE UNDER TENSION/TORSION BIAXIAL LOADING*,1614**
A. Inoue, H. Kawakami, and T. Fujii

NDE II

- OPTICAL COHERENCE TOMOGRAPHY OF POLYMER COMPOSITES*,1626**
J. P. Dunkers, C. G. Zimba, D. L. Hunston, K. M. Flynn, R. S. Parnas, J. Fujimoto, and J. Herrmann
- ELECTRICAL RESISTANCE MEASUREMENTS IN CARBON-CARBON LAMINATES*,1636**
P. A. Parker and O. O. Ochoa
- NONDESTRUCTIVE EVALUATION OF THICK COMPOSITES*,1647**
R. E. Green, Jr.

Matrix Response

- THERMO-CHEMICAL CHARACTERIZATION OF VINYL-ESTER RESIN*,1657**
T. Bogetti, M. Stone, B. K. Fink, and J. W. Gillespie, Jr.
- FLAMMABILITY PERFORMANCE OF MULTI-LAYER PHENOLIC AND VINYL ESTER COMPOSITES MANUFACTURED USING CO-INJECTION RESIN TRANSFER MOLDING (CIRTM)*,1678**
G. P. McKnight, K. R. Bernetich, J. W. Gillespie, Jr., R. Crane
- INTERFACE ADHESION OF E-GLASS FIBERS IN MODEL POLYISOCYANURATE NETWORKS*,1688**
W. G. McDonough, G. A. Holmes, and R. C. Peterson

High Strain Rates

- ON THE FAILURE OF COMPOSITE MATERIALS AT HIGH STRAIN RATES*,1700**
J. R. Vinson and E. Woldesenbet
- COMPRESSIVE, MECHANICAL PROPERTIES OF A UNIDIRECTIONAL G30-500/RS-23 LAMINATE AND RS-23 NEAT RESIN AT HIGH STRAIN RATES AND THE DYNAMIC BEHAVIOR EFFECTS OF RS-23 ON G30-500/RS-23*,1707**
A. T. Dee and J. R. Vinson
- HIGH STRAIN RATE CHARACTERIZATION OF OFF-AXIS COMPOSITES USING SPLIT HOPKINSON PRESSURE BAR*,1732**
L. Ninan and C. T. Sun
- DYNAMIC FRACTURE OF COMPOSITE OVERWRAP CYLINDERS*,1746**
J. T. Tzeng

CAI

<i>EQUIVALENT DAMAGE AND RESIDUAL STRENGTH FOR IMPACT DAMAGED COMPOSITE STRUCTURES,</i>	1759
T. Nyman, A. Bredberg, and J. Schon	
<i>COMPRESSION AFTER IMPACT (CAI) PROPERTIES OF FLAT AND STIFFENED CF/PIXA PANELS FOR HSCT STRUCTURE,</i>	1776
T. Ishikawa, M. Matsushima, E. K. G. Lim, Y. Hayashi, M. L. Scott	
<i>DAMAGE ANALYSIS OF HONEYCOMB CORE COMPOSITE SANDWICH PLATE SUBJECTED TO LOW VELOCITY IMPACT,</i>	1787
Z. Qixuan, L. Zhengneng, W. Di	
<i>PERFORMANCE OF SANDWICH STRUCTURE WITH COMPOSITE FACE SHEETS AND COMPOSITE REINFORCED CORE,</i>	1797
R. S. Hasebe and C. T. Sun	

Ballistic Response

<i>THICKNESS EFFECTS ON IMPACT RESPONSE OF COMPOSITE LAMINATES,</i>	1810
D. Liu, R Basavaraju, and X. Dang	
<i>BALLISTIC TESTING OF AFFORDABLE COMPOSITE ARMOR,</i>	1821
K. R. Bernetich, J. W. Gillespie, Jr., Ahmed Monib, B. K. Fink, S. R. Ghiorse	
<i>STUDY OF THROUGH-THICKNESS WAVE PROPAGATION IN MULTI-LAYER HYBRID LIGHT WEIGHT ARMOR,</i>	1834
B. A. Gama, J. W. Gillespie, Jr., T. A. Bogetti, B. K. Fink, and H. Mahfuz	

Failure II

<i>SIMPLE STRESS ANALYSIS AND POINT STRESS CRITERION FOR PREDITION OF DELAMINATION FAILURE AT PLY DROPS IN CFRP/SANDWICH PANELS,</i>	1849
O. T. Thomsen, Y. Frostig, and F. Mortensen	
<i>PREDICTION OF FAILURE IN NON-LINEAR COMPOSITE LAMINATES UNDER BIAXIAL LOADING,</i>	1866
T. S. Butalia and W. E. Wolfe	
<i>DAMAGE ACCUMULATION DURING MULTIPLE STRESS LEVEL FATIGUE OF SHORT GLASS FIBER REINFORCED STYRENE-MALEIC ANHYDRIDE,</i>	1883
C. P. R. Hoppel, R. Pangborn, and R. Thomson	

AUTHOR INDEX	1893
---------------------------	-------------