Index

A
ASTM C 613, 120
ASTM D 256, 154
ASTM D 638, 4, 30, 37
ASTM D 638M, 5
ASTM D 790, 4, 5
ASTM D 3029, 154
ASTM D 3039, 75
ASTM D 3410, 75
ASTM D 3763, 144, 154, 158, 161
ASTM D 4065, 144–161, 165
ASTM D 4092, 145
ASTM D 4092, 145
ASTM E 399, 41

B
Bolted Joint, 74
Failure mode, 74
Strength, 73
Boundary layer thickness, 89

C
Clamping pressure (bolt torque), 76
Cleavage failure, 81
Complex viscosity, 150
Compression test, 75
Crack density, 58
Crack growth rate, 65
Crack propagation mode, 38
Creep, 134
Cure behavior, 151
Cylindrically orthotropic disk, 89

D
Delamination, 58, 62, 68
Denton, Douglas L., 23–35
Driscol, Stephen Burke, 144–161
Dynamic mechanical testing, 144

E
Edge cracking, 71
Environmental degradation, 104

F
Failure, 8, 45
Interlaminar, 45
Flexural, 8
Matrix, 47
Transfiber cracking, 45
Fatigue, 42, 47, 51, 52, 54
Axial, 65
Crack growth, 42
Deflection controlled, 52, 54
Flexural, 51
Life, 47
Load controlled, 54
Fiber avoidance mode, 38
Fiber avoidance model, 36
Fiber length distributions, 37
Fiber orientation, 3, 24
Fiber orientation distribution, 86, 90
Findley equation, 132
Flexure testing, 4
Fracture toughness, 41
Fraunhofer diffractometer, 27
Freeman, William T., Jr., 119–130
G
Gillespie, John W., Jr., 86-102

H
Hahn, Hong Thomas, 103-118
HCl spray mist treatment, 14
Hermann’s orientation parameter, 25, 93
Hiel, Clement, 131-143
Hoa, Suong V., 65-72
Hosangadi, Ashok B., 103-118
Hygrothermal, 103

I
Inherent flaw size, 85
Instrumented impact testing, 154
Interlaminar cracking, 45

L
Lead glass fibers, 25
Li, Chia-Geng, 36-50
Linear elastic fracture mechanics, 41
Liquid environment, 65
Loos, Alfred C., 119-130

M
McGarry, Frederick J., 36-50
Mandell, John F., 36-50
Matrix cracks, 40
Matrix crazing, 40, 46
Mechanical property variability, 5
Microhardness measurements, 67
Modulus,
  Degradation, 55
  Tension, of R25 SMC, 9
  Flexural, of E-glass/epoxy, 57
Moisture, 104, 105
  Absorption, 104
  Desorption, 104
  Diffusion, 105
Mold coverage, 30
Morris, Donald H., 131-143
Munson-McGee, Stuart H., 23-35

N
Net tension failure, 83
Newaz, Golam M., 51-64
Ngo, Ahn-Dung, 65-72

P
Pipes, R. Byron, 86-102
Pseudo-stiffness ratio, 56
Pyrolysis, 14

R
Resin content, 120
Resin flow, 119
Rheology, 145

S
Sankar, Thiagas S., 65-72
Shear yield zone, 40, 46
Shirrell, C. David, 3-22
Short beam shear, 105
SMC R25, 3
SMC R50, 74
SMC R65, 65
S-N curve, 46, 61
Stiffness degradation, 55
Strength, 5, 8, 75
  Flexural, 5, 8
    SMC R25, 8
  Tension, 75
    SMC R50, 75
Surface fiber veil, 14
Swelling coefficient, 115
  Longitudinal, 115
  Transverse, 115

T
Tension test, 4, 30, 37
Thermoeelastic response, 86
Time-dependent behavior, 132
<table>
<thead>
<tr>
<th>U</th>
<th>Ultrasonic attenuation, 105</th>
<th>Wilson, Dale W., 1, 73–85, 163–165</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>Viscoelasticity, 131, 145, 146</td>
<td>X-radiographic tracer fibers, 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X-radiography, 24</td>
</tr>
<tr>
<td>W</td>
<td>Weibull strength distribution, 6</td>
<td>Yen, Shing-Chung, 131–143</td>
</tr>
</tbody>
</table>