

Damage Strain Analysis of Parallel Fiber Eutectic

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Abstract : According to isotropy of parallel fiber eutectic, the no- damage strain field in parallel fiber eutectic is obtained from the flexibility tensor of parallel fiber eutectic. Considering the damage behavior of parallel fiber eutectic, damage variables are introduced to determine the strain field of parallel fiber eutectic. The damage strains in the matrix, interphase, and fiber of parallel fiber eutectic are quantitatively analyzed. Results show that damage strains are not only associated with the fiber volume fraction of parallel fiber eutectic, but also with the damage degree.

Keywords : damage strain, initial strain, fiber volume fraction, parallel fiber eutectic

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