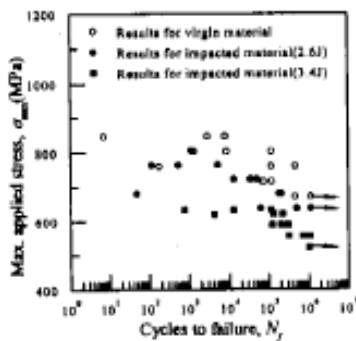


충격손상 CFRP 적층복합재료의 피로 특성

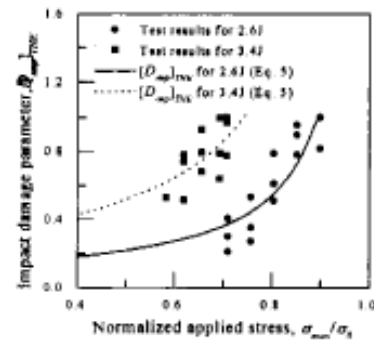
This paper presents the fatigue behavior of composite materials with impact-induced damage. The impact damage parameter is proposed to evaluate the effect of impact damage on fatigue life. Subsequently, a new model is developed to predict the fatigue life of impacted composite materials. Also, a stochastic model is proposed to describe the variation of fatigue life due to the material nonhomogeneity. For these models, the fatigue tests were performed on the unimpacted and impacted composite material. The effect of impact damage on fatigue life can be characterized by the impact damage parameter. Additionally, the results by the present fatigue life prediction model agree well with experimental results regardless of applied impact energy. Also, the variation of fatigue life can be described by the present stochastic model and is reduced with applied impact energy.

키워드

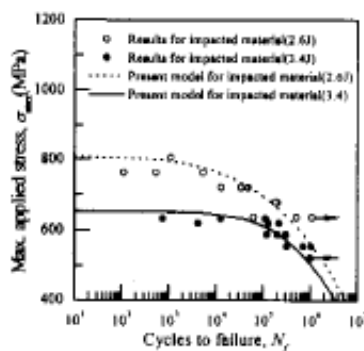
CFRP 적층 복합재료, 충격손상 파라미터, 피로수명, 확률론적 해석



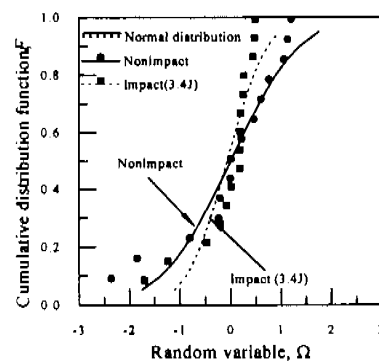
Fatigue behavior of carbon/epoxy laminates with impact energy



Impact damage parameter



Fatigue behavior of impacted laminates



Cumulative distribution function of random variable

원 제 목	충격손상 CFRP 적층 복합재료의 피로 특성
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