

عنوان مقاله:

Progressive Failure Analysis of Open-hole Composite Laminates Under InplaneTensile Loading

محل انتشار:

اولین کنگره ملی کاربرد مواد و ساخت پیشرفته در صنایع (سال: 1396)

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خلاصه مقاله:

The present work aims to obtain failure loads for open-hole unidirectional composite plates under tensile loading. For this purpose, a user defined material model (UMAT) in the finite element analysis package ABAQUS, was developed to predict the failure load of the open-hole composite laminates using progressive failure analysis. Hashin and modified Yamanda-Sun s failure criteria with Complete and Camanho s material degradation model are studied. In order to achieve the most accurate predictions, the influence of failure criteria and property degradation rules are investigated and failure loads and failure modes of the composites compared with the same experimental test results from literatures. A good agreement between experimental results and numerical predictions was observed

کلمات کلیدی: Progressive failure, UMAT, Failure criteria, fiber reinforced composite

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