

1. Record Nr.	UNINA9910808374403321
Autore	Kassapoglou Christos
Titolo	Modeling the effect of damage in composite structures : simplified approaches / / Christos Kassapoglou
Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2015 ©2015
ISBN	1-119-01324-0 1-119-01323-2 1-119-01322-4
Descrizione fisica	1 online resource (253 p.)
Collana	Aerospace Series
Disciplina	624.171
Soggetti	Structural analysis (Engineering) Composite materials - Design
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>""Cover ""; ""Title Page ""; ""Copyright "";</p> <p>""Contents ""; ""Series Preface "", ""Preface</p> <p>"; ""Chapter 1 Damage in Composite Structures: Notch Sensitivity</p> <p>"; ""1.1 Introduction ""; ""1.2 Notch Insensitivity</p> <p>"; ""1.3 'Complete' Notch Sensitivity", ""1.4 Notch Sensitivity of</p> <p>Composite Materials "", ""Exercises</p> <p>""</p> <p>""References """"Chapter 2 Holes """, ""2.1</p> <p>Stresses around Holes "", ""2.2 Using the</p> <p>Anisotropic Elasticity Solution to Predict Failure</p> <p>"; ""2.3 The Role of the Damage Zone Created Near a Hole</p> <p>""</p> <p>""2.4 Simplified Approaches to Predict Failure in Laminates with Holes: the Whitney-Nuismer Criteria</p> <p>""""2.5 Other Approaches to Predict Failure of a Laminate with a Hole</p> <p>"; ""2.6 Improved Whitney-Nuismer Approach</p> <p>""</p> <p>""2.7 Application: Finding the Stacking Sequence Which Results in Good OHT Performance</p> <p>""""Exercises "", ""References """, ""Chapter 3 Cracks</p>

""; ""3.1 Introduction
Composite Laminate
Width Effects
""3.4 Other Approaches for Analysis of Cracks in Composites
"""; ""3.5 Matrix Cracks
"""; ""3.6 Exercises
"""; ""3.3 Finite-
Width Effects
""
""; ""References
"""; ""4.1 Introduction
Methods and Criteria
""4.3 Modelling Different Structural Details in the Presence of
Delaminations
""

Sommario/riassunto

Comprehensively covers new and existing methods for the design and analysis of composites structures with damage present

- Provides efficient and accurate approaches for analysing structures with holes and impact damage
- Introduces a new methodology for fatigue analysis of composites
- Provides design guidelines, and step by step descriptions of how to apply the methods, along with evaluation of their accuracy and applicability
- Includes problems and exercises
- Accompanied by a website hosting lecture slides and solutions
