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## Structural Failure Analysis and Prediction Methods for Aerospace Vehicles and Structures

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## About the ebook

This book deals with structural failure (induced by mechanical, aerodynamic, acoustic and aerothermal, loads, etc.) of modern aerospace vehicles, in particular high-speed aircraft, solid propellant rocket systems and hypersonic flight vehicles, where structural integrity, failure prediction and service life assessment are particularly challenging, due to the increasingly more demanding mission requirements and the use of non-traditional materials, such as non-metallic composites, in their construction.

## Contents

- Nomenclature
- Fatigue Life Assessment for High Performance Metallic Airframe Structures An Innovative Practical Approach
- A Generic Design Procedure for the Repair of Acoustically Damaged Panels
- Aerothermal and Structural Dynamic Analysis of High-Speed Flight Vehicles
- Fatigue Crack Growth Analysis for Notched Specimens under Flight Spectrum Loading
- Application of Refined Plate Theory to Fracture and Fatigue
- Non-Destructive Evaluation Methods for Solid Rocket Motor Structural Health Monitoring

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